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Long Term Care Nurses' Knowledge and Perceived Competency of Palliative Care

Carol Evans

Western Kentucky University, carol.evans@wku.edu

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Long Term Care Nurses' Knowledge and Perceived Competency of Palliative Care

Carol Evans, MSN, NED, RN, CNE

Western Kentucky University

Final DNP Capstone Project

NURS 780

Dr. Beverly Siegrist

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Abstract

Background: Palliative care is considered a right for human beings. By 2040, it is estimated that 40% of the 65 years of age and older population in the United States will die in long term care (LTC) facilities. Because of the chronicity of the geriatric population's medical conditions, the patients may require end-of-life (EOL) care. Numerous LTC facilities are located in rural areas which may create a disparity in the provision of quality EOL care.

Methods: A quantitative descriptive cross-sectional design was utilized. The purpose of this study was to examine rural and urban nurses' knowledge of palliative care and confidence/competency to provide palliative care for EOL patients in LTC facilities. Data collection occurred at three rural and three urban LTC facilities which consisted of a convenience sample of 74 nurses in south-central Kentucky. Analysis of data was performed with SAS software utilizing descriptive, *ANOVA*, and *t-test* statistics.

Results: The study subjects responded below 50% on the Palliative Care Knowledge Test (PCKT). A statistically significant difference was found between the PCKT subset of gastrointestinal and age. Registered nurses had more total knowledge of palliative care on the PCKT than the licensed practical nurses. No statistical significant difference was noted on the Self-Efficacy in Palliative Care (SEPC) Survey between the rural and urban subjects.

Conclusions: The primary conclusion of this study was that rural and urban nurse study subjects lacked knowledge of palliative care, but had a perceived confidence/competency to provide palliative care.

Keywords: knowledge of palliative care, perceived confidence/competency, end-of-life, long term care facilities

Long Term Care Nurses' Knowledge and Perceived Competency of Palliative Care

Section 1 – Background and Significance

Nurses care for patients and their families across the trajectory of an illness and into death in long term care (LTC) facilities. According to the American Nurses Association's (ANA) (2010) *Registered Nurses Roles and Responsibilities in Providing Expert Care and Counseling at the End of Life*, nurses are expected to provide the highest quality of life and care for end of life (EOL) patients and their families. The nurse's fidelity entails providing comfort measures and relief from physical, emotional, spiritual, or existential suffering. Another responsibility of the nurse is to provide information on EOL choices before death occurs (ANA, 2010). The American Association of Colleges of Nursing (AACN) has recognized that EOL issues in nursing curriculum have been inconsistent or missing. As a result, the AACN has created EOL Competency Statements that every undergraduate nursing student should achieve. Nursing faculty in colleges and universities can voluntarily integrate this content into curriculum at their institutions (AACN, 2015).

Before nurses can educate the patient on choices, the nurse must have an awareness and knowledge of the options. Palliative care is one such choice that is becoming recognized as a right for human beings across the world. Palliative care is a specialty of healthcare that will increase the quality of life for patients and their families that is confronted with a life-threatening illness. Palliative care is implemented with early and thorough assessments and the treatment of pain and other symptoms, physical, and spiritual factors to prevent and relieve suffering (World Health Organization [WHO], 2014). Researchers have assessed nurses' knowledge and misconceptions of palliative care with the Palliative Care Quiz for Nurses (PCQN) and found nurses have 61 percent or less out of 100 percent of the palliative care knowledge content (Brazil

et al., 2012; Ross, McDonald, & McGuinness, 1996). Prem et al. (2012) utilized the Palliative Care Knowledge Test (PCKT) to evaluate nurses' knowledge of palliative care where the mean score was as low as 35.8% out of 100%.

According to Brazil et al. (2012), it is estimated by 2040 that 40% of the 65 years of age and older population in the United States will die in LTC facilities. Many of these patients have chronic diseases which require the patient to receive palliative care until their death. Because of the chronicity of the geriatric population's medical conditions in LTC facilities, the patients require EOL care (Brazil et al., 2012). Since September 27, 2012, the patient's plan of care in LTC facilities must reflect that the patient is approaching EOL. If the patient is not receiving palliative care, the patient or their legal representative must be educated on palliative care services (Centers for Medicare and Medicaid Services {CMS}, 2012).

Palliative care and hospice care are not same. Palliative care is a specialty within its own right. Curative or disease modifying treatments can be continued with palliative care, but this is not the case with hospice care where the prognosis of living is six months or less (Meier, 2011). According to Ferrell et al. (2007), individuals in palliative care can live weeks, months, or years with their chronic illness. A multidisciplinary approach is utilized in palliative care to promote the best quality of life for the patients and their families. Palliative care will assess and manage symptoms, support the patients' decisions and keep patients and their families informed to reach attainable goals. Society does not have a clear understanding of palliative care which halts members of society from obtaining a high level of EOL care (Ferrell et al., 2007).

According to the National Hospice and Palliative Care Organization (NHPCO) (2013), hospice care services were utilized for only 17.2% of patients who had resided in LTC facilities. There are fewer palliative care programs than hospice programs in LTC facilities. Patients in

LTC facilities wish to stay at the facility at their EOL. There are many different sizes of facilities and number of patients in LTC facilities (NHPCO, 2013). According to Swagerty (2010), many LTC facilities do not have a comprehensive palliative care service program. Therefore, patients in LTC facilities may not benefit from a high level of EOL care. The goal of palliative care is more reasonable and satisfying than the traditional medical model (Swagerty, 2010).

According to Artnak, McGraw, and Stanley (2011), geographical location does create a disparity between the health care needed and the health care received. The Institute of Medicine (IOM) and the Institute for Healthcare Improvement (IHI) Triple Aim Initiative has created a framework to summon all that are involved in healthcare to recreate healthcare in concurrence with specific objectives (Artnak et al., 2011). According to DiBello and Coyne (2014), the specific objectives of the Triple Aim Initiative include improving patient experience, population health, and reducing healthcare costs. Artnak et al. (2011) estimates that by the year 2050, the population of 65 years and over will double. Some of this elderly population will be in LTC facilities which demand entrance and continuous healthcare services that are not being met because of a lack of accessibility to palliative care (Artnak et al., 2011).

The fact that palliative care is not accessible to everyone causes social concerns. In the United States, Americans spend more money than any other country for health care services, but the results does not equate with a high quality of life (Meier, 2011). Because there are disparities in who receives palliative care, many individuals suffer at the EOL (Wright, Wood, Lynch, & Clark, 2008). There is no prognostic restriction for palliative care. Ideally, palliative care should be started when the patient is diagnosed with a life-limiting illness when the patient and the family are in distress. The patient and the family can be assisted to comprehend the medical

strategies that will be instituted. Patients in LTC facilities and their families can create informed and realistic goals for care (Thompson, Bott, Boyle, Gajewski, & Tilden, 2011).

Palliative care is a distinctive specialty, and nurses without the additional training can have a misunderstanding about who, when, and what palliative care should be provided. Mahon and McAuley (2010) studied oncology nurses' personal understanding of palliative care. Nurses believed palliative care concentrated on symptom management. Most of the nurses could not differentiate between hospice care and palliative care and thought patients who were near death should be given palliative care. Oncology nurses and LTC nurses devote a great deal of time with patients who can affect the patient's care and outcome (Mahon & McAuley, 2010).

Statement of the Problem

Patients who reside in LTC facilities have chronic diseases, and Brazil et al. (2012) predicts that 40% of the 65 years of age and older population in the United States will die in LTC facilities which will require EOL care. Palliative care is an option for EOL care. Nurses are the healthcare professional in LTC facilities who are responsible to ensure that patients' healthcare choices will be implemented. This creates the need to evaluate nurses' knowledge and perceived confidence/competency to provide palliative care and to develop this quality improvement project.

Purpose

The purpose of this quantitative descriptive cross-sectional study was to examine rural and urban nurses' (registered nurses (RNs) and licensed practical nurses (LPNs)/licensed vocational nurses (LVNs)) knowledge of palliative care and the confidence/competency to provide palliative care for EOL patients in LTC facilities. The knowledge of palliative care encompasses the philosophy and principles of palliative care, management of pain and other symptoms,

spiritual, and psychosocial aspects of care (Ross et al., 1996). The nurses' knowledge of palliative care will have an impact on the nurses' perceived confidence/competency to provide palliative care. According to Brazil et al. (2012), the perceived confidence/competency of nurses to provide palliative care has three subsets: patient management, communication, and multidisciplinary teamwork.

Significance of Project for Nursing and Health Care

The United States Department of Health and Human Services, CMS, and the National Quality Forum (NQF) describe palliative care as patient and family-centered care. According to the National Consensus Project for Quality Palliative Care (2013), palliative care augments quality of life by anticipating, inhibiting, and managing suffering. Palliative care provided throughout the trajectory of illness addresses the physical, intellectual, emotional, social, and spiritual needs and enables patient autonomy, right of information, and choice for patients and their families (National Consensus Project for Quality Palliative Care, 2013).

The IOM's (2014) report entitled, *Dying in America: Improving Quality and Honoring Individual Preferences Near the End of Life* recommends several key factors related to palliative care. Health care should provide patient and family centered care that is available to EOL patients and delivered by health care organizations which are covered by federal and private insurers. Advance care planning should take place but not replace continuous open communication with the patient and family about EOL issues. Educational institutions and health care professionals should expand the palliative care knowledge base. The IOM also recommends a reorientation of reimbursement systems to reflect the needs and preferences of patients at the EOL. Lastly, the IOM recommends that there is a need for public education and dialogue on EOL issues (IOM, 2014).

Nurses in LTC facilities are on the frontline in providing palliative care to the geriatric population. This population can have life-limiting conditions or diseases and may choose palliative care at any stage in the trajectory of their illness. Palliative care will provide patient-centered care that enhances quality of life, facilitates patient independence, access to information, and choice of treatments during times of distress for the patient and their families (Mahon & McAuley, 2010).

Theoretical Foundation

The study can be conceptualized by applying the Donabedian model which is depicted in Figure 1. According to Moran (2014a), the Donabedian model demonstrates that quality healthcare flows from three categories: structure, process, and outcome. A quality structure leads to quality processes which lead to quality patient outcomes (Moran, 2014a). According to McQuestion (2006), the structure is the characteristics of the setting where palliative care will be provided. The process category of Donabedian model determines if best practices have been carried out or have not been carried out. The outcome of Donabedian model determines the impact that the healthcare services have on the health status of the patient and their families (McQuestion, 2006).

In the Donabedian quality of care framework, quality improvement occurs when deficits in the structure and process categories are corrected or improved which requires the structure and the processes to be monitored. This feedback assists with quality improvement (McQuestion, 2006). As the field of palliative care evolves, nurses' knowledge and perceived confidence/competency to provide palliative care to EOL patients in LTC facilities are examined in the context of a quality improvement framework utilizing the Donabedian model.

Figure 1

Categories of Donabedian Model



Figure 1. Shows the three categories of Donabedian model for quality improvement.

Structure.

The structure describes the characteristics of the three rural and three urban LTC facilities in south-central Kentucky. The structure of the rural and urban facilities can be described by the nursing home profile. The nursing home profile provides information on the number of certified beds, participation within Medicare and Medicaid, ownership, placement of automatic sprinkler systems within the facility, location within a continuing care retirement community or hospital, and accessibility of a resident and/or family council (CMS, 2014a).

There are more characteristics that are important to the structure of the LTC facility. The number of patients who reside at the LTC facility is a characteristic. An important characteristic is the personnel who provide direct care such as the RN, LPN/LVN, certified nurse aide (CNA), and the physical therapist (PT). A LTC facility must have at least one RN on duty for eight straight hours, seven days a week, and either a RN or a LPN/LVN on duty twenty-four hours per day. The federal government does not mandate a specific staffing level for LTC facilities (CMS, 2014g).

According to Ferrell et al. (2007), the National Quality Forum (NQF) in 2007 published a set of preferred clinical practices for quality palliative care which can be implemented across the continuums of care. The NQF's preferred clinical practices were created from the National Consensus Project (NCP). The NCP outlined a framework that defined eight domains of quality palliative care. The NCP's domain one addresses that healthcare professionals should receive

advanced training and certification in palliative care (Ferrell et al., 2007). Since nurses are providing care and educating the patient and their families about choices, nurses in LTC facilities must have the knowledge of palliative care.

Process.

The process category of the Donabedian model determines if best practices have been followed or have not been followed (McQuestion, 2006). According to Ferrell et al., (2007), the NCP's domains two through eight addresses the physical, psychological, social, and spiritual needs that are required of palliative care patients. The NCP's domains also recognize the importance that culture has on illness and death, and the essentials of palliative care become more imperative as the patient nears death. The NQF's preferred clinical practices are voluntary and are not a requirement for certification for LTC facilities at this time (Ferrell et al., 2007).

The time that the personnel (RNs, LPNs/LVNs, CNAs, PTs) work at the LTC facilities has a direct impact on if best practices have been followed or have not been followed. The total number of hours that is provided by licensed staff nurses (RNs and LPNs/LVNs) per patient per day is reflective of the characteristics of the LTC facility. The CNA provides care to patients every hour of every day. The care that the PT provides is dependent on the needs of the patient. The staffing hours from the LTC facilities are reported to the state survey agency two weeks before an inspection. The staff hours are the amount of hours provided to each patient per day. The staffing hour per patient per day ratio is calculated by dividing the time worked by the number of patients at the LTC facility (CMS, 2014g).

The MDS Version 3.0 is an assessment done by the nurses at the LTC facilities at fixed intervals on every patient who resides in a Medicare or a Medicaid certified facility. The MDS Version 3.0 collects information on the patient's health, physical activity, psychological status,

and overall well-being. The information from the MDS Version 3.0 is utilized to evaluate the patient's needs and create a plan of care. The quantity of time that RNs and LPNs/LVNs work with patients can greatly impact if the plan of care or if best practices have been followed (CMS, 2015).

Outcome.

The outcome category of the Donabedian model is the result of the structure and process category (McQuestion, 2006). According to the CMS (2008), LTC facilities are rated on a scale of one to five stars. A facility with five stars is considered to have above average quality when compared to another facility in the same state. When the LTC facility has one star, the quality is below the average in that state, but the LTC facility still meets Medicare's minimum requirements. Therefore, the more stars the LTC facility has the higher quality of care that the facility provides. The overall five star rating is established on the star ratings from three different categories such as health inspections, quality measures, and staffing levels. The health inspection rating includes information on annual visits, complaint investigation findings, and onsite inspections from the last three years. The quality measure rating is based on the factors of percentage of patients with pressure ulcers, patients with mild to severe pain, and number of patients who have had changes in their mobility. The quality measure rating explains how well the LTC facilities provide care for these measures. The staffing level rating provides information on the amount of time of care that is given by the nursing staff to each patient in a day. The staffing level rating takes into consideration the level of care that is needed in the different LTC facilities too (CMS, 2008).

According to CMS (2015), the overall star rating system for LTC facilities comes from different sources. The CMS's Health Inspection database includes information on the LTC

facility's attributes and health deficits that occurred within the last three state inspections and compliant investigations. Information for the staffing category comes from the star rating system and penalties that have been imposed on LTC facilities which are derived from the CMS Health Inspection database too. The quality measure category from the five star rating system is derived from Minimum Data Set (MDS) Repository (CMS, 2015).

Information from on-site inspections from state surveyors is entered into the Online Survey, Certification and Reporting (OSCAR) data network which is maintained by CMS and the state surveying agencies. The OSCAR data contains information for the purpose of certification of LTC facilities for participation in the Medicare and Medicaid programs. The OSCAR entails the utmost comprehensive source of a LTC facility's level of information regarding the facility's operations, patient census and regulatory compliance. On-site evaluations occur once during a 15 month interval or in response to a complaint being investigated. During on-site inspections, state surveyors will collect information on the LTC facility's standard health and life safety deficits. The information collected on the Standard Health Survey are assessed to determine if the LTC facility is providing care and services that meet the federal government's standard of quality healthcare and the patient's assessed needs. Information that is gathered on the Life Safety Survey are assessed to determine if the LTC facility is meeting the requirements for the Life Safety Code fire and building safety standard which is integrated into the federal requirements (American Health Care Association {AHCA}, 2015).

When state surveyors discover a substandard of healthcare, a follow-up visit will be conducted. A substandard quality of care is described as a LTC facility having one or more deficiency with scope/severity levels on the MDS Version 3.0 sections' F, H, I, J, K, and L in any of the regulatory grouping of Patient Behavior and Facility Practices, Quality of Life, and Quality of Care. On the

follow-up visit, the state surveyors will reevaluate if the LTC care facility is in compliance with the standard of quality care and service (CMS, 2014h).

The conceptual framework of Donabedian model provides a foundation for quality improvement within this study. The structure of where nurses are practicing can impact if nurses have the knowledge of palliative care. The process of Donabedian model can assess if nurses in LTC facilities have implemented the NCP's preferred clinical practices for quality palliative care and if the nurses have the confidence/competency to provide palliative care to EOL patients. The outcome of Donabedian model will evaluate the quality of palliative care that patients in the LTC facilities received and if improvements need to be made.

Clinical Questions

This research examined the differences between rural and urban nurses' knowledge of palliative care and perceived confidence/competency for EOL patients in LTC facilities. The research questions for this study were:

- What is rural nurses' knowledge of palliative care for EOL patients in LTC facilities?
- What is urban nurses' knowledge of palliative care for EOL patients in LTC facilities?
- Is there a difference between rural nurses' and urban nurses' knowledge of palliative care for EOL patients in LTC facilities?
- What is rural nurses' perceived confidence/competency to provide palliative care for EOL patients in LTC facilities?
- What is urban nurses' perceived confidence/competency to provide palliative care for EOL patients in LTC facilities?

- Is there a difference between rural nurses' and urban nurses' confidence/competency to provide palliative care for EOL patients in LTC facilities?
- Is there a difference between Palliative Care Knowledge Test (PCKT) scores/subsets and the demographic variables such as age, highest education level completed in nursing, duration as a nurse, duration of employment, and total years practiced in LTC facilities?

Definition of Key Terms

The following are the conceptual definitions of the key concepts in this study.

Knowledge of palliative care. Knowledge of palliative care encompasses the philosophy and principles of palliative care, management of pain and other symptoms, spiritual, and psychosocial aspects of care (Ross et al., 1996). Knowledge of palliative care will be assessed in this project with the PCKT (Nakazawa et al., 2009).

Palliative care. Palliative care is a specialty of healthcare that will increase the quality of life for patients and their families that is confronted with a life-threatening illness. Palliative care is implemented with early and thorough assessments and the treatment of pain and other symptoms, physical and spiritual factors to prevent and relieve suffering (WHO, 2014).

Perceived confidence/competency. Perceived confidence/competency to provide palliative care is the confidence of the nurse to provide palliative care. Perceived confidence/competency has three subsets: patient management, communication, and multidisciplinary teamwork (Brazil et al., 2012).

End-of-life. End-of-life care is about the total care of a patient with an advanced incurable illness which may last for weeks, months, or years and does not just equate with dying (WHO, 2014).

Rural long term care facilities. A rural LTC facility is a facility that is located within a population of less than 50,000 people (United States Census Bureau [USCB], 2013).

Urban long term care facilities. An urban facility is a facility that is located within a population of more than 50,000 people (USCB, 2013).

Section 2 - Critical Review of Pertinent Literature

Theoretical, Methodological and Empirical Research

Because of the IHI Triple Aim Initiative (DiBello & Coyne, 2014) and the estimation of the geriatric population who will die in LTC facilities (Brazil, et al. 2012), a literature review was conducted to assess the literature pertaining to palliative care provided in LTC facilities by nurses to EOL patients in rural and urban locations. Many of the nursing staff in LTC facilities has not received training or educational preparation to provide palliative care. If nurses have not received the training or educational preparation to provide palliative care, does nurses have the perceived competency/confidence to provide palliative care? The clinical question underlying this review was to determine rural and urban nurses' knowledge and perceived confidence/competency to provide palliative care to EOL patients in LTC facilities. The purpose of this study was to examine the knowledge and perceived confidence and competency of nurses to provide palliative care to EOL patients in rural and urban LTC facilities and to provide an educational intervention after the evaluation if the facilities deem the intervention is necessary.

A review of the literature was performed to examine nurses' knowledge of palliative care that was measured utilizing the Palliative Care Knowledge Test (PCKT) (Nakazawa et al., 2009) and the Palliative Care Quiz for Nurses (PCQN) (Ross et al., 1996). The knowledge of palliative has been measured most frequently with the PCQN. The validity and reliability of the PCQN was established in 1996, but the definition of palliative care does not follow the WHO (2014) definition of palliative care (Nakazawa et al., 2009). The definition of palliative care utilized in the PCKT (Nakazawa et al., 2009) reflects the most recent definition of palliative care (WHO, 2014). This is the reason why the PCKT is utilized for this study. Perceived confidence/competency to provide palliative care and EOL care in LTC facilities was also

reviewed as well. The literature was then reviewed for rural or urban LTC facilities that delivered palliative care. Research studies that implemented palliative care in LTC facilities in either a rural (Robinson et al., 2010), urban, or both (Hodgson, Landsberg, Lehning, and Kleban, 2006; South Dakota State University {SDSU}, 2014) geographical settings were reviewed. There was no specific research study that focused on palliative care in only urban settings though. End-of-life research studies were reviewed for the implementation of palliative care in LTC facilities (Kelly, Thrane, Virani, Malloy, & Ferrell, 2011; Thompson, Bott, Boyle, Gajewski, & Tilden, 2011)

This literature review searched PubMed, Cochrane Libraries, Google Scholar, and CINAHL databases from 2006 to 2015 using the keywords; knowledge of palliative care; perceived competence; rural nursing home; urban nursing home; end of life care; and confidence to provide palliative care. After applying inclusion and exclusion criteria to the titles and abstracts, the remaining literature was hand searched for eligibility. One investigator independently screened all results. The literature was narrowed by reviewing titles and abstracts, if available; to establish that knowledge of and competence/confidence of palliative care or EOL care was performed in LTC facilities was the direct content of the literature. It was necessary to carefully review titles and perform advanced searches to narrow the number of citations that included “palliative care”, “EOL care”, and “competence/confidence” in the title to those that were related to LTC facilities.

The desired population for this search was the geriatric population who were in LTC facilities. All study designs were included whose focus was palliative care or EOL care in the selected population. Most studies were qualitative in nature. The study must have a publication date that ranged from 2006 to 2015 and be published in English. An exception to the inclusion

criteria was that the author allowed the inclusion of the research articles by Mason and Ellershaw (2004), and Ross et al., (1996). The research article by Mason and Ellershaw (2004) contained the research tool, Self-Efficacy in Palliative Care (SEPC) Survey, which measured perceived confidence/competency within this study. The article Ross et al., (1996) included the conceptual definition of knowledge of palliative care. Exclusion criterion included that the full-texted article was not available, or the study was a non-English publication. Articles about palliative care that were not delivered to the geriatric population or not provided in LTC facilities were excluded as well.

Empirical Evidence Strength Rating

Twenty-nine potential citations were initially retrieved; 10 from PubMed, 5 from Cochrane Libraries; 6 from Google Scholar; and 8 from CINAHL. Using the inclusion and exclusion criteria, the reviewer examined the titles and abstracts. When there was indecision or the unavailability of an abstract, the investigator reviewed the full text. There was a single investigator. Of the 29 studies, eleven met the criteria for this systematic review. There were mixtures of qualitative and quantitative design studies. The design of the 11 studies varied in levels of evidence according to the British Committee for Standards in Haematology (British Committee for Standards in Haematology, 2010). There were 1 (1b), 2 (2a), 1 (2b), 1 (3a), 2 (3b), 3 (3c), and 1 (4c) level studies.

Knowledge of palliative care.

Ross et al. (1996) performed a quantitative pre-test and post-test design study. A convenience sample of 200 four-year generic nursing students and 196 post-RN students in Canada were utilized. Ross et al., (1996) investigated the level of knowledge of palliative care with the Palliative Care Quiz for Nurses (PCQN) which reflected the definition of palliative care

at that time. Participants were students who were enrolled in a generic 4-year baccalaureate nursing program and a post-RN nursing program that were progressing toward a baccalaureate nursing degree and nurses who were practicing that had obtained a RN license or registered practical nurse license. The mean scores for registered nurses (RN) were 75%, post-RN students were 65%, registered practical nurses were 60%, and generic nursing students were 46%. The mean percentage of correct responses on the PCQN for the total sample was 61% out of 100% which demonstrated that nursing students and nurses lack knowledge of palliative care (Ross et al., 1996).

Prem et al. (2012) conducted a quantitative cross-sectional design study of 363 nurses in a multispecialty hospital. The investigators examined nurses' knowledge of palliative care utilizing the PCKT among nursing professionals who was attending an in-service at a multispecialty tertiary care hospital. The overall score for the participants on the PCKT was 35.8%. Nurses' knowledge of the philosophy of palliative care was 36.5%. According to Prem et al. (2012), nurses in the study had a low understanding of the philosophy of palliative care and a low understanding of the general knowledge of palliative care.

Brazil et al. (2012) conducted a quantitative cross-sectional design study. A convenience sample of 119 RNs and LPNs from four LTC facilities in Canada was utilized. Brazil et al. (2012) examined the knowledge level of nurses utilizing the PCQN. The mean score for participants on the PCQN was 59.5% out of 100% for the participants. According to Brazil et al. (2012), nurses in the study understood 12 out of 20 questions pertaining to palliative care on the PCQN.

Perceived confidence/competency.

Brazil et al. (2012) performed a quantitative cross-sectional design study. Researchers utilized the Self-Efficacy in End-of-Life Care (S-EOLC) Survey to examine nurses' perceived competency to care for dying patients in LTC facilities. The S-EOLC Survey contains the Self Efficacy in Palliative Care (SEPC) Survey and the Thanatophobia Scale. The researchers found that nurses were more confident in patient management than multidisciplinary teamwork or communication when dealing with the patients in LTC facilities (Brazil et al., 2012).

Kaasalainen et al. (2007) conducted a qualitative descriptive design with focus groups at three LTC facilities. The investigators examined nurses' perceptions around providing palliative care for dementia patients in LTC facilities. Nurses viewed patients' general deterioration of health as the main factor that a patient was palliative, and the nurses' aim was to facilitate a "good death" for patients with dementia while trying to manage multiple demands and handle environmental issues. The nursing staff and families of dying patients expressed a need for supportive and educational initiatives which supports a need for increased competency to provide palliative care (Kaasalainen et al., 2007).

Hall, Goddard, Stewart, and Higginson (2011) conducted a qualitative design study at nine care homes in London. The sample consisted of nine care home managers, eight nurses, nine assistants, 11 residents, and seven of the residents' families which were involved in the Gold Standards Framework for Care Homes in London. The study examined the benefits and barriers to the Gold Standards Framework for Care Homes (GSFCH) in palliative care. Key tasks of the GSFCH are the 7 Cs: communication, coordination, control symptoms, continuity, continued learning, carer support, and care of the dying. The benefits of the GSGCH were supportive care registers, coding predicted stage of illness, and advance care planning. Hall et al. (2011) found

that when a nurse in the Gold Standards Framework for Care Homes (GSFCH) could not discuss death, the nurse may not demonstrate confidence/competency to practice palliative care.

End of life care.

Thompson et al. (2011) implemented a quantitative pre-test and post-test design study. During Phase One, the sample consisted of 717 staff from 26 nursing homes. During Phase Two, the sample consisted of 2779 staff from 85 nursing homes. The investigators utilized the Palliative Care Survey (PCS) to measure the extent to which nursing home staff engage in palliative care practices and have knowledge consistent with a good EOL. Investigators found that what staff actually does as opposed to what they think they do or think they are supposed to do are separate entities. Investigators also found that the PCS captured variation in staff's behavior and knowledge of palliative care (Thompson et al., 2011).

Kelly et al. (2011) conducted a quantitative comparative longitudinal design study. The sample consisted of 351 California-based nurses and other staff who worked in LTC facilities, skilled nursing facilities and hospice facilities that provided care to the geriatric population. Investigators found in the End of Life Nursing Education Consortium (ELNEC) Geriatric "train the trainer" project that LTC staffs need and want EOL training and education. The project enhanced EOL education, skills, knowledge, and confidence for all staff at all levels (Kelly et al., 2011).

Rural and urban long term care facilities.

Hodgson et al. (2006) conducted a mailed survey of 91 administrators of LTC facilities in Pennsylvania. Investigators found that urban LTC facilities were more likely to offer palliative care services than a rural LTC facility. The rural LTC facilities identified a need for training in pain management, and the urban facilities identified a need for bereavement training. Larger

LTC facilities were found to have established pain management practices within their facilities which were independent of geographical location. The interdisciplinary team which is fundamental to palliative care is usually not found in a rural setting. The majority of the facilities in this study were nonprofit. According to Hodgson et al., (2006), geographical location can affect accessibility and delivery of the physical and social aspects of palliative care (Hodgson et al., 2006).

Robinson et al. (2010) conducted a qualitative focus design study in three rural British Columbia communities. Researchers identified three themes in rural palliative care: nature of palliative care health services, nature of rural relationships, and competencies for rural palliative care. Robinson et al. (2010) found that the diversities in a rural setting involve that palliative care needed to be personalized for the geographical location, cultural and health factors of their patients to improve care.

Researchers from SDSU (2014) performed a phone survey of 455 of the state's 668 health care facilities. The health care facilities consisted of clinics, assisted living centers, specialty clinics, hospice and home health providers, hospitals and nursing homes. These health care facilities were 30 percent urban, 46 percent large rural and 24 percent small rural. There was no specific individual at the facilities who served as a point of contact for advanced care directives and planning which are important factors of palliative care and EOL care. Researchers found that 80 percent of the health care institutions' staff did not have palliative care training and 73 percent of the facilities had no training in EOL care (SDSU, 2014).

Empirical Support Synthesized

A major gap in the literature was the definition of palliative care, and palliative care was used interchangeably with hospice. When there was not a definitive definition of palliative care,

the research may have focused on concepts other than the philosophy and principles, of palliative care, management of pain and other symptoms, the spiritual and the psychosocial aspects of care. The literature reviewed found that nurses lack knowledge of palliative care (Brazil et al., 2012; Prem et al., 2012; Ross et al., 1996). When nurses lack knowledge of palliative care, nurses may lack the confidence/competency to provide palliative care (Brazil et al., 2012; Hall et al., 2011; Kaasalainen et al., 2007). Communication was a subset of confidence/competency to provide palliative care. Hall et al. (2011) found that subjects had difficulty discussing death; therefore healthcare providers who cannot discuss death may not have the confidence/competency to provide palliative care to patients. Thompson et al. (2011) found that what a health care provider thinks they provide as palliative care may not be palliative care. The geographical location of the LTC facilities impacted if palliative care was delivered or even if the management of pain or other symptoms were provided (Hodgson et al., 2006; SDSU, 2014).

No studies investigated nurses' knowledge of palliative care in rural and urban LTC facilities concurrently. The majority of the studies examined nurses' knowledge of palliative care that was conducted outside of the United States (Brazil et al., 2012; Prem et al., 2012; Ross et al., 1996). No studies examined rural and urban nurses' perceived confidence/competency to provide palliative care concurrently either (Brazil et al., 2012; Hall et al., 2011; Kaasalainen et al., 2007). There is a gap in the literature regarding the relationship between rural and urban nurses' knowledge and perceived confidence/competency to provide palliative care to EOL patients in LTC facilities. Rural LTC facilities were less likely to provide palliative care services which were influential in rural nurses' perceived confidence/competency to provide palliative care (Hodgson et al., 2006; Robinson et al., 2010; SDSU, 2014).

Section 3 - Methods

Design

A quantitative descriptive cross-sectional design was implemented. After ethical consideration for human subjects was approved by Western Kentucky University's (WKU) Institutional Review Board (IRB) and approval by DONs and administrators from participating facilities, a convenience sample of RNs and LPNs/LVNs were recruited from three rural and three urban LTC facilities. A recruiter statement was read to potential subjects by the researcher. Potential subjects were given printed informed consent to read to participate within the study. Nurses' knowledge of palliative care's principles and philosophy, management of pain and other symptoms, and psychosocial aspects of care was measured with the PCKT (Nakazawa et al., 2009). Nurses' perceived confidence/competency to provide palliative care to EOL patients was measured with the SEPC Survey (Mason & Ellershaw, 2004) which evaluated nurses' confidence with EOL communication, patient management, and multidisciplinary teamwork. The Demographical Data Survey gathered demographical data about the subjects. This sole researcher attended each facility to administer the paper and pencil evaluation. Results of the surveys examined the level of knowledge of palliative care for rural and urban LTC nurses. The method provided data needed to examine what is the rural and urban nurses' perceived confidence/competency to provide palliative care to EOL patients. A comparison of the rural and urban nurses' knowledge and perceived confidence/competency to provide palliative care to EOL patients in LTC facilities was examined.

Description of Population

A convenience sample from three rural and from three urban LTC facilities was utilized. All nurses employed at the facilities had the opportunity to participate regardless of their gender,

age, racial, ethnic group, marital status, socioeconomic status, or level of education. The nurses included RNs and LPNs/LVNs. The inclusion criteria were that the nurses had to have an active license to practice nursing in the state of Kentucky and be English speaking.

The time that the personnel (RNs, LPNs/LVNs, CNAs, PTs) work at the LTC facilities has a direct impact on if best practices have been followed or have not been followed. The RNs at rural LTC facility A provided 40 minutes per patient per day of care, and LPNs/LVNs provided 47 minutes of care to a patient per day. The CNAs delivered one hour and 52 minutes of care per patient per day. The physical therapist (PT) provided one minute of care per patient per day (CMS, 2014a). The RNs at the rural LTC facility B provided 40 minutes per patient per day of care, and LPNs/LVNs provided two hours and one minute of care to a patient per day. The CNAs delivered 18 minutes of care per patient per day. The physical therapist (PT) provided four minutes of care per patient per day (CMS, 2014b). The RNs at rural LTC facility C provided 43 minutes per patient per day of care, and LPNs/LVNs provided 56 minutes of care to a patient per day. The CNAs delivered three hours and three minutes of care per patient per day. The physical therapist (PT) provided two minutes of care per patient per day (CMS, 2014c).

The RNs at the urban LTC facility A provided 46 minutes per patient per day of care, and LPNs/LVNs provided one hour and one minute of care to a patient per day. The CNAs delivered two hours and eight minutes of care per patient per day. The PT provided two minutes of care per patient per day (CMS, 2014d). The RNs at the urban LTC facility B provided 56 minutes per patient per day of care, and LPNs/LVNs provided 49 minutes of care to a patient per day. The CNAs delivered two hours and 16 minutes of care per patient per day. The PT provided 12 minutes of care per patient per day (CMS, 2014e). The RNs at urban LTC facility C provided 47 minutes per patient per day of care, and LPNs/LVNs provided 53 minutes of care to

a patient per day. The CNAs delivered two hours and seven minutes of care per patient per day. The PT provided three minutes of care per patient per day (CMS, 2014f).

Setting

The rural and urban LTC facilities were for-profit, accept Medicare, Medicaid, and private reimbursement from their patients, and were located in south-central Kentucky. A rural LTC facility was a facility that was located within a population of less than 50,000 people (United States Census Bureau [USCB], 2013). According to CMS (2014a; 2014b; 2014c), each of the rural facilities had automatic sprinkler systems in all of the required places. None of the three rural LTC facilities were located within a continuing care retirement community or hospital. Each of the rural facilities had a resident council (CMS, 2014a; CMS, 2014b; CMS, 2014c).

According to CMS (2014a), the overall star rating for rural LTC facility A is one star. When the overall star rating for rural LTC facility A is examined, the facility received one star for health inspection, and two stars for the quality measure and staffing level categories (CMS, 2014a). The rural facility A was a 50-bed facility that was located in a community of less than 500 individuals with a higher percentage of the population older than 65 years of age when compared to any of the urban communities within the study. The racial profile of the community was 94.1% white, 0.3% some other race, and 5.3% African American or black (United States Census Bureau [USCB], 2014a). The dominant religious denominations were Southern Baptist, Church of Christ, United Methodist, Catholic Church, and others (Advameg, Inc., 2013a). There were no hospitals located in this rural community, but there was a rural hospital located within a seven mile radius.

According to CMS (2014b), the overall star rating for rural LTC facility B is one star. When the overall star rating for rural LTC facility B is examined, the facility received one star for

health inspection, and two stars for the quality measure and staffing level categories (CMS, 2014b). The rural facility B was a 74-bed facility that was located in a community of less than 5,000 individuals with a high percentage of the population older than 65 years of age when compared to any of the urban communities within the study. The racial profile of the community was 97.5% white, 1.1% African American or black, and 0.5% some other race (USCB, 2014b). The dominant religious denominations were Old Missionary Baptist, Southern Baptist, Church of Christ, and other (Advameg, Inc., 2013b). There is no hospital within this community, but there are several general physicians.

According to CMS (2014c), the overall star rating for rural LTC facility C is four stars, and the facility has received four stars for each of the categories of health inspection, quality measures, and staffing. The rural facility C was a 94-bed facility that was located in a community of less than 15,000 individuals with a high percentage of the population older than 65 years of age when compared to any of the urban communities within the study too. The racial profile of the community was 86.1% white, 8% African American or black, and 2.1% some other race (USCB, 2014c). The dominant religious denominations within the community were Southern Baptist, United Methodist, Church of Christ, Christian Churches, and Churches of Christ (Advameg, Inc., 2013c). There was one hospital within the community and several general and specialty physicians' offices.

An urban facility was a facility that was located within a population of more than 50,000 people (USCB, 2013). Two of the urban facilities were located in a community of over 60,000 individuals that have a low percentage of the population older than 65 years of age when compared to its' rural counterparts. According to CMS (2014d; 2014e; 2014f), each of the urban facilities had automatic sprinkler systems in all of the required places. None of the three urban

LTC facilities were located within a continuing care retirement community or hospital. Each of the urban facilities had a resident council (CMS, 2014d; CMS, 2014e; CMS, 2014f), and urban LTC facility A and C had a family council too (CMS, 2014d; CMS, 2014f).

According to CMS (2014d), the overall star rating for urban LTC facility A is four stars, and the facility has received four stars for each of the categories of health inspection, quality measures, and staffing. The overall star rating for urban LTC facility B is four stars but received two stars for health inspection, four stars for staffing, and five stars for the quality measure category (CMS, 2014e). Urban LTC facility A had a 48- bed and urban LTC facility B had a 66- bed capacity. The racial profile of the community was 75.8% white, 13.9% African American or black and 4.2% Asian Indian (USCB, 2014d). The dominant religious denominations were Southern Baptist, United Methodist Church, Catholic, Church of Christ, and others such as Muslims and Hindu (Advameg, Inc., 2013d). There were two hospitals in this urban community, and this urban community had numerous physicians with general practices and specialties areas.

According to CMS (2014f), the overall star rating for urban LTC facility C is two stars. Urban facility C received two stars for the health inspection category but received three stars for the staffing level and quality measure categories (CMS, 2014f). Urban facility C was a 130-bed facility that was located in a community of approximately 58,000 individuals that had a low percentage of the population older than 65 years of age when compared to its' rural counterparts. The racial profile of the community was 87.5% white, 7.3% African American or black, and 1.6% some other race (USCB, 2014e). The dominant religious denominations within the community were Southern Baptist, Catholic Church, United Methodist, and other (Advameg, Inc., 2013e). There was a large tertiary hospital within the community, and there were numerous general and specialty physicians.

Outcomes

The researcher received permission (see Appendix A) to utilize the PCKT (Nakazawa et al., 2009) and the SEPC Survey (Mason & Ellershaw, 2004). Three instruments were utilized within the study: the Demographical Data Survey, the PCKT and the SEPC Survey.

Demographical data survey.

The Demographical Data Survey provided descriptive data for the rural and urban nurses. The Demographical Data Survey (see Appendix B) included: age; race; ethnicity; highest educational level completed; years employed at present facility; total years employed in LTC facilities; number of palliative care in-services/continuing education courses attended within the last two years; level of care (personal care, intermediate care, or skill care) worked at the LTC facilities; and a relative or significant other cared being for in a palliative care unit.

Palliative Care Knowledge Test (PCKT).

The PCKT (see Appendix C) measured knowledge of palliative care (Nakazawa et al., 2009). The self-administered test contained 20 “true”, “false”, or “unsure” items. The philosophy of palliative care subset (items 1-2) and the symptoms of pain (items 3- 8), dyspnea (items 9 –12), psychiatric (items 13- 16), and gastrointestinal problems (items 17-20) were measured with the PCKT. The highest achieved possible score is 20 which can be converted to a percentage score. The achieved score was multiplied by five to calculate the achieved percentage of correct responses (Nakazawa et al., 2009).

Nakazawa et al. (2009) established reliability of the PCKT with internal consistency and a test-retest examination. The internal consistency was established at 0.81. The intraclass correlation for test-retest examination for the tool was 0.88. The five subsets of the PCKT had an intraclass correlation that ranged from 0.61 to 0.82. The known-group validity for the PCKT

was established by comparing nurses working on a palliative care unit with other nurses in the sample. The known-group validity for the PCKT was $p < 0.001$ which was established between the two groups. Validity for the five categories varied between $p < 0.01$ to $p < 0.001$. The researchers set the significance level at $p < 0.05$ (2-tailed) (Nakazawa et al., 2009).

According to DeVon et al. (2007), the PCKT demonstrated acceptable reliability because the internal consistency for a research tool needed to be $\geq .70$, and the PCKT was .81. The PCKT demonstrated a high correlation of .88 on the test-re-test, and the acceptable correlation was $> .70$. The validity for the PCKT was labeled criterion validity because of the low significance levels. The r should have been $\geq .45$ to be acceptable (DeVon et al., 2007).

Self-Efficacy in Palliative Care (SEPC) Survey.

The SEPC Survey (see Appendix D) measured perceived confidence/competency to provide palliative care (Mason & Ellershaw, 2004). The survey was self-administered, and measured perceived efficacy in three categories: communication (8 items), patient management (8 items), and multidisciplinary teamwork (7 items) for palliative care. The SEPC Survey contained 23 items that measured the confidence and the ability to implement palliative care. Each item was scored using a 100 *mm* visual analog scale. The subject rated his feelings in response to each item from very anxious to very confident on the 100 *mm* scale (Mason & Ellershaw, 2004).

Content validity of the SEPC Survey was established by five palliative physicians (Mason & Ellershaw, 2004). The physicians examined the questions on the survey to conclude if the questions imitated aspects of perceived self-efficacy and outcome expectancies of palliative care. There was minor adjustment of wording to questions to reflect proper representation of the three categories (Mason & Ellershaw, 2004). Further validity of the constructs was examined by factor analysis. Three categories (communication, patient management, multiprofessional

issues) accounted for 68.2% of variance among questions on the pretest and 74.7% on the post-test. The factor loadings at pretest were 0.55-0.89 and 0.45-0.87 at post-test. A factor loading of > 0.4 is associated with a super variable. The researchers did not report a significance level after the factor loading represented a super variable. The investigators established internal consistency with Cronbach's alphas that ranged from 0.92 to 0.95 across the categories at two different administrations (Mason & Ellershaw, 2004).

According to DeVon et al. (2007), a factor loading that is greater than .40 is an acceptable standard. The SEPC Survey had a factor loading that was greater than the .40 on the pre-test and the post-test which supports the SEPC Survey as valid instrument. The SEPC Survey demonstrated reliability as a research tool on the test-re-test because the reliability was above the .70 (DeVon et al., 2007).

Procedures for Implementation

The investigator obtained a signed letter of participation (see Appendix E) from the Director of Nursing (DON) and administrator from each rural and urban facility to permit the administration of surveys to the potential subjects within the facilities. If any of the rural or urban facilities did not return a letter of participation, the researcher identified other facilities within the south-central region for participation in this project. Following IRB approval, the investigator telephoned each of the rural and urban facilities to make arrangements to attend a scheduled in-service/meeting that was held at each facility. A scripted recruiter statement (see Appendix F) was read to potential subjects. A 25 dollar gift certificate was given to each of the rural and urban LTC facilities for a random drawing among the nurses who participated in the project. The potential subjects were given a written consent form (see Appendix G) to read to participate in the study. Immediately following, the subjects completed the Demographical Data

Survey, the PCKT, (Nakazawa et al., 2009) and the SEPC Survey (Mason & Ellershaw, 2004).

This investigator administered the Demographical Data Survey, the PCKT, and the SEPC Survey at each of the three rural and the three urban facilities and answered any questions about the project. When the data collection was completed, subjects placed the surveys in a sealed envelope. The envelope was pre-labeled as urban or rural facility. After the completed surveys were collected, the investigator withdrew a ticket and announced the winner of the 25 dollar gift certificate. The investigator thanked the facilities, nurses, and administrators for their cooperation and participation.

Data Analysis and Evaluation

The purpose of this quantitative descriptive cross-sectional study was to examine rural and urban nurses' (RNs and LPNs/LVNs) knowledge of palliative care, and the nurses' confidence/competency to provide palliative care for EOL patients in LTC facilities. The knowledge of palliative care encompasses the philosophy and principles of palliative care, management of pain and other symptoms, spiritual, and psychosocial aspects of care (Ross et al., 1996). The nurses' knowledge of palliative care may have an impact on the nurses' perceived confidence/competency to provide palliative care. The perceived confidence/competency of nurses to provide palliative care has three subsets: patient management, communication, and multidisciplinary teamwork (Brazil et al., 2012). The differences between the PCKT (Nakazawa et al., 2009) scores/subsets and the demographical variables were examined. The collected data was first entered into an Excel spreadsheet. The data for this study was analyzed using SAS software, Version 9.3 (SAS, 2013). The statistical analyses utilized were descriptive to designate the quantitative data of demographic variables, PCKT total and subsets, SEPC Survey total and subsets; *ANOVA* for comparison between PCKT subsets and demographic variables of age,

highest education completed in nursing, years as a nurse, years of employed at facility, and total years practiced in LTC facilities; *t-test* statistics for rural and urban nurses' knowledge on the PCKT to determine the difference between the groups; and *t-test* statistics for rural and urban nurses' perceived confidence/competency on the SEPC Survey.

Protection for Human Subjects

Approval for the project was obtained from WKU's IRB for protection of human subjects and from the participating LTC facilities. Potential subjects were given written instructions about the study and informed that participation was voluntary. Anonymity of the subjects was maintained and subjects were informed that at any time during the study those subjects could withdraw from the study. A written consent form that summarized the study accompanied the three surveys: Demographical Data Survey, the PCKT, and the SEPC Survey.

Completion of the Demographical Data Survey, the PCKT, and the SEPC Survey implied consent for participation in the study. The potential subjects were informed that findings from the study may contribute to the understanding of nurses' knowledge and perceived confidence/competency to provide palliative care to EOL patients in LTC facilities. Findings from the study may serve as a foundation for future potential educational in-services and research in palliative and EOL care.

The Demographical Data Survey, the PCKT and the SEPC Survey was placed in an envelope by the subjects at the completion of the evaluation and sealed. The Demographical Data Survey, the PCKT and the SEPC Survey for the rural facility were encoded with the number one and for the urban facility were encoded with the number two. Only the study's investigator, a statistician, and the investigator's project committee would have access to the data. Data was stored on a university password protected computer in the investigator's office at

WKU and paper copies of the Demographical Data Survey, PCKT, and the SEPC Survey is secured in a locked filing cabinet in the investigator's office at WKU for three years.

Section 4 - Results

Demographics

A convenience sample of 74 nurses was recruited from an accessible population of 77 in-service/meeting attendees. The sample accounted for 96 percent of the accessible population. All 74 nurses met the inclusion criteria. The rural population consisted of 33 nurses and the urban population consisted of 41 nurses. The age of study subjects ranged from 25 to 69 years of age. The mean age of the sample was 43.2 years of age with a standard deviation of 10.1. The sample consisted of equal numbers of LPNs ($n = 37$) and RNs ($n = 37$). Table 1 describes the physical and educational characteristics of the study subjects.

Table 1

Physical and Educational Characteristics of Study Subjects

Variables (Missing)	Frequency (%)
Sex	
Female	69(93.2)
Male	5(6.8)
Race	
African American/Blacks	4(5.4)
White	70(94.6)
Ethnicity (6)	
Non-Hispanic/Non-Latino	62(91.2)
Not Reported	6(8.8)
Highest Education Level in Nursing	
LPN/LVN	37(50)
ASN	33(44.6)
BSN	4(5.4)
Level of Care	
Intermediate	7(9.5)
Skill	67(90.5)
Relative/Significant Others in Palliative Care (1)	
Yes	20(27.4)
No	53(72.6)

Table 2 reports the study subjects' years of practice as a nurse, years of experience in LTC, and number of palliative care in-services/continuing education courses attended in the previous two years. There was a wide range of responses for the study subjects for the above variables.

Table 2

Demographic Data Related to Practice as a Nurse, LTC, and Palliative Care In-Services

Variables (missing)	M(SD)	Range
Years as a nurse	14.4 (10.9)	0.5-50
Years of employment	5.7(6.6)	0.1-28
Total years in LTC (1)	11.4(8.1)	0.5-36
Number of palliative care in-services/continuing education courses in last 2 years (4)	2.9(5.3)	0-40

Study subjects responses on the PCKT.

The study subjects responded below 50% on nine items (item number 9, 6, 7, 10, 11, 13, 14, 16, and 19) of 20 questions on the PCKT, which measured the knowledge of palliative care (Nakazawa et al., 2009). The rural nurses' total PCKT score was 47.9% and the urban nurses' total PCKT score was 50.5% (see Appendix I). The subset of philosophy on the PCKT had two of the highest scored items on the PCKT. Study subjects ($f=65$) scored 87.8% on the question, "Palliative care should only be provided for patients who have no curative treatment available"; and study subjects ($f=67$) scored 91.8% on the question, "Palliative care should not be provided along with anti-cancer treatments". The lowest correct response for the study subjects was item 7. Study subjects ($f=6$) scored 8.1% on the question, "Long-term use of opioids can often induce addiction" (see Table 3).

Table 3

Responses for the PCKT Subsets for the Total Study Sample

Subsets	Questions	Responses <i>f</i> (%)		
		True	False	Unsure
Philosophy Item 1	Palliative care should only be provided for patients who have no curative treatment available.	9(12.2)	*65(87.8)	-
Item 2	Palliative care should not be provided along with anti-cancer treatments.	3(4.1)	*67(91.8)	3(4.1)
Pain Item 3	One of the goals of pain management is to get a good night's sleep.	*59(88.1)	7(10.5)	1(1.5)
Item 4	When cancer pain is mild, pentazocine (Talwin) should be used more often than an opioid.	15(21.1)	*17(23.9)	39(54.9)
Item 5	When opioids are taken on a regular basis, non-steroidal anti-inflammatory drugs should not be used.	18(25.4)	*39(54.9)	14(19.7)
Item 6	The effect of opioids should decrease when pentazocine (Talwin) or buprenorphine hydrochloride (Buprenex) is used together after opioids are used.	*24(33.8)	14(19.7)	33(46.5)
Item 7	Long-term use of opioids can often induce addiction.	67(90.5)	*6(8.1)	1(1.4)
Item 8	Use of opioids does not influence survival time.	*45(62.5)	22(30.6)	5(6.9)
Dyspnea Item 9	Morphine should be used to relieve dyspnea in cancer patients.	*30(61.2)	16(32.6)	3(6.1)
Item 10	When opioids are taken on a regular basis, respiratory depression will be common.	52(70.3)	*14(18.9)	8(10.8)
Item 11	Oxygen saturation levels are correlated with dyspnea.	61(82.4)	*12(16.2)	1(1.4)
Item 12	Anticholinergic drugs or scopolamine hydrobromide (Transderm-V) are effective for alleviating bronchial secretions of dying patients.	*49(66.2)	7(9.3)	18(2.3)
Psychiatric Item 13	During the last days of life, drowsiness associated with electrolyte imbalance should decrease patient discomfort.	*16(22.2)	46(63.9)	10(13.9)
Item 14	Benzodiazepines should be effective for controlling delirium.	*29(40.3)	26(36.1)	17(23.6)
Item 15	Some dying patients will require continuous sedation to alleviate suffering.	*63(86.3)	8(11)	2(2.7)
Item 16	Morphine is often a cause of delirium in terminally ill cancer patients.	49(66.2)	*19(2.7)	6(8.1)
Gastro-Intestinal Problems Item 17	At terminal stages of cancer, higher calorie intake is needed compared to early stages.	29(39.2)	*40(54.1)	5(6.8)
Item 18	There is no route except central venous for patients unable to maintain a peripheral intravenous route.	17(23.6)	*52(72.2)	3(4.2)
Item 19	Steroids should improve appetite among patients with advanced cancer.	*35(47.3)	28(37.8)	11(14.9)

Item 20	Intravenous infusion will not be effective for alleviating dry mouth in dying patients.	*48(64.9)	19(25.7)	7(9.5)
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Note. Correct responses with asterisks and bold typed. From “The palliative care knowledge test: reliability and validity of an instrument to measure palliative care knowledge among health professionals,” by Y. Nakazawa, M. Miyashita, T. Morita, M. Umeda, Y. Oyagi, & T. Ogasawara, (2009), *Palliative Medicine*, 23(8), 754-766.

Study subjects responses on the SEPC Survey.

The study subjects had the highest perceived confidence level on the question ($M = 82.6$), “I would feel in my ability to assess the patient’s needs”. The question was on the subscale of patient management of the SEPC Survey, which measured perceived confidence/competency to provide palliative care (Mason & Ellershaw, 2004). The second question ($M = 77.5$) with the highest perceived confidence, “I would feel working within a multi-professional palliative care team”, was on the subscale of multi-professional issues of the SEPC Survey. The subscale of communication on the SEPC Survey had the lowest scored question ($M = 58.2$), “I would feel discussing the likely effects of cancer with the patient”. Table 4 reports the study subjects’ confidence/competency means and standard deviation for each question on the SEPC Survey.

Table 4

Total Sample Responses on SEPC Survey

Subscales	Questions	M(SD)
Communication	I would feel discussing the likely effects of cancer with the patient.	58.2(28.4)
	I would feel discussing the likely effects of cancer with the patient's family.	60.7(26.1)
	I would feel discussing issues of death and dying	67.1(25.4)
	I would feel discussing the patient's own death (<i>with the patient</i>).	61.9(27.9)
	I would feel discussing the patient's death (<i>to occur</i>) with the family.	66.1(26.2)
	I would feel discussing the patient's death with the family upon bereavement.	68.9(24.4)
	I would feel answering the patient's question "How long have I got to live?"	61.3(27.2)
Patient Management	I would feel answering the patient's question "Will there be much suffering or pain?"	66.6(23.5)
	I would feel in my ability to assess the patient's needs.	82.6(11.1)
	I would feel in my knowledge of the aetiology of common symptoms experienced by palliative care patients.	70(21.5)
	I would feel in my ability to manage common symptoms experienced in palliative care patients.	76.3(15)
	I would feel in my ability to prescribe appropriate and adequate pain control medication.	68.2(25.6)
	I would feel in my knowledge of the therapeutic and side effects of analgesic agents.	75(16.6)
	I would feel in my ability to provide psychological care for the palliative care patient and their family.	75.5(18.1)
	I would feel in my ability to provide social care for the palliative care patient and their family.	72.4(20)
	I would feel in my ability to provide spiritual care for the palliative care patient and their family.	73.5(20)
	I would feel working within a multi-professional palliative care team.	77.5(18.3)
Multi-Professional Issues	I would feel appropriately referring palliative care patients for physiotherapy.	70.3(20.9)
	I would feel appropriately referring palliative care patients for occupational therapy.	72.2(20)
	I would feel appropriately referring palliative care patients for complementary therapies.	73.3(19.1)

I would feel appropriately referring palliative care patients to a lymphoedema service.	66.6(22)
I would feel appropriately referring palliative care patients for psychiatric evaluation.	71.9(20.2)
I would feel appropriately referring palliative care patients to a spiritual advisor.	72.8(25.1)

Note. From “Assessing undergraduate palliative care education: Validity and reliability of two scales examining perceived efficacy and outcome expectancies in palliative care” by S. Mason, & J. Ellershaw, (2004). *Medical Education*, 38. Adapted with permission by S. Mason.

Specific Results

The purpose of this study was to examine rural and urban nurses' (RNs and LPNs/LVNs) knowledge of palliative care, and the nurses' confidence/competency to provide palliative care for EOL patients in LTC facilities. The knowledge of palliative care encompasses the philosophy and principles of palliative care, management of pain and other symptoms, spiritual, and psychosocial aspects of care (Ross et al., 1996). The nurses' knowledge of palliative care may have an impact on the nurses' perceived confidence/competency to provide palliative care. The perceived confidence/competency of nurses to provide palliative care has three subsets: patient management, communication, and multidisciplinary teamwork (Brazil et al., 2012).

First, the data were analyzed using descriptive statistics to determine knowledge of palliative care and perceived confidence/competency. *T-tests* were conducted to determine if there was a difference between the rural and urban nurses' knowledge level on the PCKT and the perceived confidence/competency on the SEPC Survey to provide palliative care to EOL patients in LTC facilities. Lastly, a two sample *t-test* and ANOVA was utilized to determine if there were differences between the PCKT subsets and the demographic variables of age, highest education level completed in nursing, years as a nurse, years of employment, and total years practiced in LTC facilities. A *post hoc test* was utilized to investigate the differences between the demographic variable and PCKT subsets when a statistical difference was noted.

The following research questions were proposed for this study:

1. What was rural nurses' knowledge of palliative care for EOL patients in LTC facilities?

2. What was urban nurses' knowledge of palliative care for EOL patients in LTC facilities?
3. Were there differences in rural and urban nurses' knowledge of palliative care for EOL patients in LTC facilities?
4. What were rural nurses perceived confidence/competency to provide palliative care for EOL patients in LTC facilities?
5. What were urban nurses perceived confidence/competency to provide palliative care for EOL patients in LTC facilities?
6. Was there a difference in rural and urban nurses' confidence/competency to provide palliative care for EOL patients in LTC facilities?
7. Were there a difference between Palliative Care Knowledge Test (PCKT) scores/subsets and the demographic variables such as age, highest education level completed in nursing, duration as a nurse, duration of employment, and total years practiced in LTC facilities?

Research question one. What was rural nurses' knowledge of palliative care for EOL patients in LTC facilities? Nurses' knowledge of palliative care for the rural nurses was measured by the PCKT (see Appendix C). The rural nurses achieved a total score of 47.9% out of 100% with a mean of 9.58 (SD = 2.77) on the PCKT. The rural nurses scored the lowest on the subscales of pain (Mean = 2.58; SD = 1.2), dyspnea (Mean = 1.21; SD = 0.93), and psychosocial issues (Mean = 1.61; SD = 0.79) on the PCKT. Table 5 reports the rural nurses' mean and standard deviation for each subset on the PCKT.

Research question two. What was urban nurses' knowledge of palliative care for EOL patients in LTC facilities? The knowledge of palliative care for the urban nurses was measured by the PCKT (see Appendix C). The urban nurses achieved a total score of 50.5% out of 100% with a mean of 10.1 (SD = 2.25) on the PCKT. The urban nurses scored the lowest on the subscales of pain (Mean = 2.56; SD = 1.12), dyspnea (Mean = 1.58; SD = 1.07), and psychosocial issues (Mean = 1.8; SD = 0.93) on the PCKT. Table 5 reports the urban nurses' mean and standard deviation for each subset on the PCKT.

Research question three. Were there differences in rural and urban nurses' knowledge of palliative care for EOL patients in LTC facilities? A *t-test* was conducted to determine if there was a difference between the rural and urban nurses' knowledge of palliative care for EOL patients in LTC facilities. There was no statistically significant difference found between the rural nurses (M = 9.6, SD = 2.8) and the urban nurses on the total PCKT (M = 10.1, SD = 2.3), $t(72) = -0.85, p = 0.2109, CI_{.95} -1.66, 0.67$. Therefore, we fail to reject the null hypothesis that there was no difference in PCKT scores between the rural and urban nurses. Table 5 reports *t-test* results of PCKT subsets scores.

Table 5

Rural and Urban Nurses PCKT Total/Subsets Scores

	Rural	Urban				
	(n)	(n)				
	33	41				
PCKT	M (SD)	M (SD)	<i>p</i>	<i>t</i>	<i>df</i>	95% CI
subsets						
Philosophy	1.76 (0.56)	1.80 (0.51)	0.572	0.38	72	-0.30, 0.20
Pain	2.58 (1.20)	2.56 (1.12)	0.671	0.05	72	-0.52, 0.55
Dyspnea	1.21 (0.93)	1.58 (1.07)	0.401	-1.58	72	-0.84, 0.10
Psychosocial	1.61 (0.79)	1.80 (0.93)	0.344	-0.98	72	-0.60, 0.21
Gastrointestinal	2.42 (1.03)	2.32 (0.82)	0.18	0.50	72	-0.32, 0.54
Total	9.58 (2.77)	10.1 (2.25)	0.211	-0.85	72	2.14, 2.98

Note. (n) = number of population. M = mean. (SD) = standard deviation. *p* = *p* value. *t* = *t*-statistic. *df* = degree of freedom. CI = Confidence Interval.

Research question four. What was rural nurses' perceived confidence/competency to provide palliative care for EOL patients in LTC facilities? The perceived confidence/competency to provide palliative care to EOL patients in LTC facilities for the rural nurses was measured by the SEPC Survey (see Appendix D) with weighted means. The rural nurses ($n = 33$) achieved a total mean of 1535 ($SD = 327$) on the SEPC Survey on the twenty-three questions. Each question was scored by a mark on a 100 mm VAS by each study subject. The rural nurses had the highest mean score of 82.2 ($SD = 10.6$) on the question, "How you think you would feel in my ability to assess the patient's needs". The rural nurses had the lowest mean score of 50.8 ($SD = 28.0$) on the question, "How do you think you would feel in discussing the likely effects of cancer with the patient". Table 6 reports the perceived confidence/competency of the rural nurses on the SEPC Survey subscales (see Appendix I for the mean and standard deviation of each of the questions on the SEPC Survey for the rural study subjects).

Research question five. What are urban nurses perceived confidence/competency to provide palliative care for EOL patients in LTC facilities? The perceived confidence/competency to provide palliative care to EOL patients in LTC facilities for the urban nurses was measured by the SEPC Survey (see Appendix D) with weighted means. The urban nurses achieved a total mean of 1663 ($SD = 331$) on the SEPC Survey. Each question was scored by a mark on a 100 mm VAS by the study subjects. The urban nurses had the highest mean score of 83.0 ($SD = 11.7$) on the question, "How you think you feel in my ability to assess the patient's needs". The urban nurses had two questions that tied with the lowest mean score of 64.2. The first question, "How you think you feel in your ability in discussing the likely effects of cancer with the patient" had a $SD = 27.5$, and the second question, "How you think you feel in answering the patient's question "How long have I got to live" had a $SD = 27.0$. Table 9

illustrates the perceived confidence/competency of the urban nurses on the SEPC Survey subsets (see Appendix I for the mean and standard deviation of each of the questions on the SEPC Survey for the urban study participants).

Research question six. Was there a difference in rural and urban nurses' confidence/competency to provide palliative care for EOL patients in LTC facilities? There was no statistically significant difference found between the rural nurses ($M = 1535.4$, $SD = 327.3$) and the urban nurses total scores ($M = 1662.5$, $SD = 330.9$), $t(72) = -1.65$, $p = 0.959$, $CI_{95} = -280.6, 26.43$. Therefore, we fail to reject the null hypothesis that there was no significant difference on the SEPC Survey scores between the rural and urban nurses. When the rural and urban nurses were compared on the SEPC Survey subsets, there was no significant difference found on the subsets between the groups (see Table 6). There were three questions on the SEPC Survey that did have a statistical significant difference. Urban nurses ($M = 64.21$, $SD = 27.54$) were more confident than rural nurses ($M = 50.79$, $SD = 28.04$), $t(72) = -2.07$, $p = 0.904$, $CI_{95} = -26.36, -0.476$ on question one, "How do I feel discussing the likely effects of cancer with the patient". Urban nurses ($M = 67.61$, $SD = 23.52$) were more confident than rural nurses ($M = 52.11$, $SD = 27.01$), $t(72) = -2.64$, $p = 0.403$, $CI_{95} = -27.22, -3.788$ on question two, "How do I feel discussing the likely effects of cancer with the patient's family". Urban nurses ($M = 74.77$, $SD = 18.88$) were more confident than rural nurses ($M = 64.09$, $SD = 23.30$), $t(72) = -2.18$, $p = 0.207$, $CI_{95} = -20.45, -0.906$ on question ten, "How do I feel in my knowledge of the etiology of common symptoms experienced by palliative care patients".

Table 6

Differences Among Rural and Urban Nurses on the SEPC Survey Subsets

	Rural	Urban				
	(n)	(n)				
	33	41				
SEPC Survey subsets	M (SD)	M (SD)	df	t	p	95% CI
Communication	473.7 (162.9)	540.7 (158.8)	72	-1.79	0.871	{-141.9, 7.83}
Patient Management	571.1 (100.7)	607.9 (101.1)	72	-1.56	0.991	{-83.85, 10.24}
Multi Professional Issues	490.7 (136.1)	513.9 (113.2)	72	-0.80	0.267	{-80.98, 34.55}

Note. (n) = number of population. M = mean. (SD) = standard deviation. *t* = *t*-statistic. *df* = *degree of freedom*.

p = *p* value. CI = Confidence Interval.

Research questions seven. Were there differences between the Palliative Care Knowledge Test (PCKT) scores/subsets and the demographic variables such as age, highest education level completed in nursing, years as a nurse, years of employment, and total years practiced in LTC facilities? The demographic variables of age, duration as a nurse, duration of employment, and total years practiced in LTC facilities were divided into three groups because these variables had such a wide range (see Table 7 for ranges). ANOVA was conducted between the demographic variables of age, years as a nurse, years of employment, and total years practiced in LTC facilities and the PCKT subsets. No statistically significant differences were found between the PCKT subsets and the demographic variable of years as a nurse, years of employment, and total years practiced in LTC facilities. Therefore, we fail to reject the null hypothesis that there was no difference between the PCKT subsets and the demographic variables of years as a nurse, years of employment, and total years practiced in LTC facilities (see Table 7). A statistically significant difference was noted between the PCKT subset of gastrointestinal and the demographic variable of age ($F = 4.65, p = 0.013$). Therefore, we can reject the null hypothesis and conclude that the demographical variable of age and the PCKT subset of gastrointestinal were not all the same. A *post hoc* analysis indicated that group three of age (oldest nurses) had more gastrointestinal knowledge on the PCKT than group one (youngest nurses) of age.

Table 7

Differences in PCKT Subsets and Demographic Variables

Demographic Variables		PCKT Subsets					
	(n)	Total M(SD)	Philosophy M(SD)	Pain M(SD)	Dyspnea M(SD)	Psychosocial M(SD)	Gastrointestinal M(SD)
Age (years)							
(Group 1): 25-36	24	9.71 (2.07)	1.67 (0.70)	2.63	1.58	1.79 (0.93)	2.04 (0.69)**
(Group 2): 37-46	22	9.45 (3.00)	1.86 (0.35)	(1.06)	(1.14)	1.77 (0.87)	2.23 (1.02)
(Group 3): 47-69	28	10.3 (2.40)	1.82 (0.48)	1.18	1.41	1.61 (0.83)	2.75 (0.89)**
				(1.14)	(0.96)		
				2.82	1.29		
				(1.19)	(0.98)		
Duration as Nurse(years)							
(Group 1): 0.5-7	25	9.16 (2.51)	1.60 (0.71)	2.44	1.36	1.72 (0.98)	2.04 (0.84)
(Group 2): (8-15)	21	9.86 (2.57)	1.86 (0.36)	(1.12)	(1.15)	1.67 (0.86)	2.19 (0.81)
(Group 3): (16-50)	28	10.46	1.89 (0.42)	2.57	1.57	1.75 (0.80)	2.79 (0.92)
		(2.33)		(1.08)	(0.87)		
				2.68	1.36		
				(1.25)	(1.03)		
Duration of Employment (years)							
(Group 1): 0.1-1	25	9.95 (3.05)	1.95 (0.21)	2.77	1.50	1.55 (0.91)	2.18 (0.91)
(Group 2): 1.5-5.5	27	9.56 (2.3)	1.63 (0.74)	2.52	1.44	1.78 (0.85)	2.37 (0.97)
(Group 3): 6-28				(1.19)	(0.87)		

				2.44	1.78		
				(1.19)	(0.85)		
Years in LTC							
(years)							
(Group 1): 0.5-5	24	10.0 (2.68)	1.88 (0.33)	2.72	1.40	1.80 (0.91)	2.20 (0.82)
(Group 2): 6-14	27	9.39 (2.15)	1.74 (0.62)	(1.14)	(1.12)	1.61 (0.89)	2.17 (0.83)
(Group 3): 15-36	28	10.1 (2.30)	1.73 (0.60)	2.39	1.48	1.73 (0.83)	2.69 (1.01)
				(1.08)	(0.90)		
				2.58	1.38		
				(1.24)	(1.06)		

Note. (n) = number of population. M = mean. (SD) = standard deviation. (**) = indicates group with difference on the Ad Hoc Analysis. $p < .05$.

The demographic variable of highest education completed in nursing had three subsets: LVN/LPN, ASN, and BSN. The subset of BSN was excluded due to minimal numbers. A *t-test* was conducted to examine the difference between the PCKT scores/subsets and the highest education level completed in nursing. A statistically significant difference was found on the total knowledge of the PCKT between the LPN/LVN ($M = 9.05$, $SD = 2.27$) and the ASN ($M = 10.6$, $SD = 2.5$), $t(68) = -2.68$; $p = 0.016$, $CI_{95} -2.654, -0.389$. Therefore, we reject the null hypothesis that there was no difference in the PCKT total scores and the highest education level completed in nursing. A statistically significant difference was noted on the philosophy subset of the PCKT between the LPN/LVN ($M = 1.649$, $SD = 0.676$) and the ASN ($M = 1.939$, $SD = 0.242$), $t(46.1) = -2.45$; $p < .0001$. Therefore, we can reject the null hypothesis that there was no difference in the PCKT subset of philosophy and the highest education level completed in nursing. No statistically significant difference was found on the PCKT subsets of pain, dyspnea, psychosocial, or gastrointestinal and the highest education level completed in nursing though (see Table 8).

Table 8

Differences Among LPN/LVN and ASN Nurses on the PCKT Scores/Subsets

	LPN/LVN	ASN				
	(n)	(n)				
	37	33				
PCKT subsets	M (SD)	M (SD)	df	t	p	95% CI
Total	9.05(2.27)	10.58(2.48)	68	-2.68	0.616	{-2.65, -0.39}
Philosophy	1.65(0.68)	1.94(0.24)	46.1	-2.45	<.0001	{-0.523, -0.052}
Pain	2.24(0.98)	2.76(1.20)	68	-1.97	0.248	{-1.035, 0.007}
Dyspnea	1.32(1.00)	1.45(1.06)	68	-0.53	0.724	{-0.623, 0.362}
Psychosocial	1.65(0.89)	1.85(0.87)	68	-0.95	0.910	{-0.620, 0.221}
Gastrointestinal	2.19(0.97)	2.58(0.83)	68	-1.78	0.384	{-0.819, 0.046}

Note. (n) = number of population. M = mean. (SD) = standard deviation. *t* = t-statistic. *df* = degree of freedom. *p* = *p* value. CI = Confidence Interval.

Validity of Results

The subjects for this study were a convenience sample of rural and urban nurses that attended an in-service/meeting at their place of employment. The population sample was strictly dependent upon attendance and volunteers which may have affected internal validity. The rural sample had a potential of 34 participants, and one potential subject declined to participate. The total rural population was 33 subjects. The urban sample had a potential of 43 participants, and two declined to participate. The total urban population was 41 subjects. Seventy-four attendees from the rural and urban LTC facilities volunteered for the study. Ninety-six percent participation was obtained from the potential sample. After applying the inclusion and exclusion criteria to study volunteers, it was determined that all 74 volunteers met the criteria for this study and were included in the study results. The data collection for the rural and urban nurses was conducted when the nurses were on duty.

There were some factors that may have affected external validity. Some of the subjects were previous students of the researcher in an associate program of nursing. These study subjects may have felt compelled to participate in the study. Some of the nurses were drawn away from the data collection that had to performed patient care, but came back to complete the surveys during the data collection. Since the data collection was conducted when the nurses were on duty, the nurses may have felt compelled to return to the floor to perform patient care. The majority of the subjects were white females.

Data collection took place at three rural LTC facilities and three urban LTC facilities that started at the end of July 2014 and stopped at the end of September 2014. All data was analyzed using descriptive statistics. A *t-test* and *ANOVA* was conducted for comparisons. When *ANOVA* was utilized, a *Post Hoc* test was utilized for multiple comparisons.

The study participants were not privy to the research hypothesis in order to maintain study blindness (Portney & Watkins, 2009). Both rural and urban samples were treated equally using the recruiter statement to recruit subjects to participate. Study subjects completed the surveys and placed surveys in an envelope which was designated for the rural or urban sample.

Section 5- Discussion and Conclusions

Summary of Results

The findings from this study support the findings of previous studies (Brazil et al., 2012; Ross et al., 1196; & Thompson et al., 2011) that nurses lack knowledge of palliative care. The study participants scored less than 50% on the PCKT. There was no statistically significant difference between the rural and urban nurses' knowledge of palliative care. Registered nurses were more knowledgeable than LPNs on the total score of the PCKT and the subset of philosophy on the PCKT. The oldest group of nurses was more knowledgeable on the PCKT subset of gastrointestinal than were than the younger group of nurses. Hodgson et al., (2006) found that nurses in rural settings have a greater need for pain management training, but this study did not support this finding. There were no statistically significant differences between the rural and urban nurses' knowledge on the subset of pain on the PCKT (Nakazawa et al., 2009).

The findings of this survey were that the study participants perceived themselves confident/competent to provide palliative care to EOL patients in LTC facilities. Urban nurses perceived themselves more confident than rural nurses on two of the eight communication questions on the SEPC Survey (Mason & Ellershaw, 2004): "How do I feel discussing the likely effects of cancer with the patient" and "How do I feel discussing the likely effects of cancer with the family". Urban nurses also perceived themselves more confident/competent than rural nurses on one of the eight patient management questions (Mason & Ellershaw, 2004): "How do I feel in my knowledge of the etiology of common symptoms experienced by palliative care patients". The rural and urban nurses had the highest scored mean on the subset of patient management on the SEPC Survey which was supported by the review of literature (Brazil et al., 2012). The subset of communication on the SEPC Survey was scored the lowest which is also supported by

findings (Brazil et al., 2012). Multiprofessional services are a cornerstone of palliative care services (Hodgson et al., 2006). Although the rural nurses had a lower mean score on multiprofessional issues than the urban nurses, there was not a statistical significant difference.

Clinical Implications of Results/ Impact on Practice

Nurses cannot practice what they do not know. Nurses who lack knowledge about the philosophy and principles of palliative care may lower the quality of EOL care for patients in LTC facilities. An evaluation of the knowledge level of nurses for palliative care is an important first step in instituting an educational intervention. Because the study participants had perceived confidence/competency to provide palliative care and a low level of knowledge on the PCKT, this inverse relationship may identify a need and effort to initiate future palliative care educational interventions. Nurses respond to the needs of society and their patients. The study participants were very receptive to participate in the study which was evident by the 96 percent participation rate of the potential sample of nurses. Findings from this study support the need for future educational interventions for nurses in both the rural and urban settings to improve the quality of palliative care services to EOL patients in LTC facilities.

Limitations and Suggestions for Improvement

A potential limitation that was not realized prior to implementation of the study was the fact that this researcher did not have an established rapport with some of the facilities within south-central Kentucky. Therefore, some of the facilities were hesitant at the beginning of the research study to allow the researcher within their facility. The researcher needed to speak with the administrator and DON of each facility in-person instead of speaking with the DON on the telephone. The DON would relay the potential study to the administrator within their facility who then would grant permission for the study. Another limitation was that there was only one

investigator at each of the three rural and three urban facilities. The sample was a convenience sample of nurses who were present on the day of data collection. For the purposes of this time-limited project, the number of facilities and nurses that participated in the study was adequate, but a larger sample size would have increased generalization of the findings. Some of the facilities' administrators, DONs and nurses have never heard of ELNEC prior to the explanation of this project. A planned session to review project findings with administrators, DONs and the nurses would have been beneficial to gain future participation within quality improvements efforts.

Suggestions for Future Clinical Projects or Research

Based on the findings from this study, each facility determines if there a need for future Geriatric End of Life Nursing Education Consortium (ELNEC) educational in-services. The researcher who is a Geriatric ELNEC Trainer has offered to provide all or any of the nine modules in the ELNEC Geriatric curriculum to the facilities in the study. The nine modules include: principles of palliative care; pain assessment and management; non-pain symptoms at the EOL; goals of care and ethical issues at the EOL; cultural and spiritual considerations in EOL care; communication; loss, grief, and bereavement; ensuring quality EOL care; and preparation for and care at the time of death. Any educational intervention will serve as a basis for research and quality improvement for the LTC facilities. The Geriatric ELNEC curriculum was developed from a project hosted by the AACN which recommends competencies and curricular guidelines for EOL nursing care. The ELNEC curriculum explains the information and skills that nurses require to deliver quality EOL care to the geriatric population (AACN, 2014). This researcher recommends that the facilities allow the researcher to present the Geriatric ELNEC curriculum for a quality improvement effort in each of the rural and urban LTC facilities.

All LTC facilities should implement a policy to instigate palliative care training for present and future nursing personnel to ensure quality EOL care to patients. The MDS Version 3.0 helps to create care that is coordinated with the patient and the families' goals, but the MDS Version 3.0 does not cover the choices that the patient may have about relief of symptoms, uniformity, or the prevention of hospitalization (Meier, Lim, & Carlson, 2010). Palliative care will provide patient-centered care that enhances quality of life; facilitate patient independence, access to information, and choice of treatments during times of distress for the patient and their families (Mahon & McAuley, 2010). The Geriatric ELNEC training (AACN, 2014) may assist nurses to have the knowledge and confidence/competency to implement palliative care as an option for EOL care which can improve the quality of life for patients in LTC facilities.

Donabedian model provided a conceptual model to improve the quality of palliative care in LTC facilities. Nurses (RNs and LPNs/LVNs) represent the structure within the Donabedian model. Since nurses are providing and educating the patient and their families about EOL choices, nurses in LTC facilities must have the knowledge of palliative care. The NCP for Quality Palliative Care (2013) recommends that professional healthcare personnel should receive advance training and certification in palliative care (Ferrell et al., 2007). The time that nurses spend with the patients signifies the process which can determine if best practices have been followed or have not been followed. The nurse collects information on the patient and enters the data in the MDS Version 3.0 which will create a plan of care for the patient. The outcome of the Donabedian model is the result of the structure and process. The overall five star rating is derived on the star rating from three different categories such as health inspections, quality measures, and staffing levels. The quality measure and staffing categories are closely

intertwined with the nurse and the nurse's knowledge of palliative care as an option for EOL care.

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85.971322&name=BARREN%20COUNTY%20HEALTH%20CARE%20CENTER&Distn=6.2](http://www.medicare.gov/nursinghomecompare/profile.html#profTab=0&ID=185229&loc=42141&lat=36.9289778&lng=-85.971322&name=BARREN%20COUNTY%20HEALTH%20CARE%20CENTER&Distn=6.2)

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86.5400674&name=COLONIAL%20CENTER&Distn=14.3](http://www.medicare.gov/nursinghomecompare/profile.html#profTab=0&ID=185048&loc=42101&lat=37.1184213&lng=-86.5400674&name=COLONIAL%20CENTER&Distn=14.3)

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86.4436018&name=BOWLING%20GREEN%20NURSING%20AND%20REHABILITATION%20CENTER&Distn=1.4

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[87.1821709&name=TWIN%20RIVERS%20NURSING%20AND%20REHAB%20CENTER&Distn=4.4](http://www.medicare.gov/nursinghomecompare/profile.html#profTab=0&ID=185087&loc=42301&lat=37.7327263&lng=-87.1821709&name=TWIN%20RIVERS%20NURSING%20AND%20REHAB%20CENTER&Distn=4.4)

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Appendix A

Permission for Tools

Re: Permission to Utilize the PCKT tool - Outlook Web App, light version

Page 1 of 2

Outlook Web App

Time taken to search: Entire Mailbox ▼

Mail

Reply

Reply All

Forward



Print

More

Calendar

Contacts

Deleted Items

Drafts [1/20]

Inbox

Junk E-Mail

Sent Items

Re: Permission to Utilize the PCKT tool

youkoe@gmail.com [youkoe@gmail.com] on behalf of Yoko Nakazawa
[yokonakazawa-tky@umin.ac.jp]

Sent: Monday, December 30, 2013 5:21 PM

To:

Dear Dr Evans,

Thank you for your mail.

You do not have to obtain copyright permission.

Everybody can use and edit the test without permission, including you.

I hope that your project will succeed.

If you have more question, please mail to me.

Best wishes for the New Year !

Yoko Nakazawa, RN, MSH

Center for Cancer Control and Information Services,

National Cancer Center

Tokyo, Japan

2013/12/30 Evans, Carol <

>

Dr. Nakazawa,

I sending this e-mail to ask for permission to use your tool, "Palliative Care Knowledge Test". I read about your tool in the journal, "Palliative Medicine", that was published in 2009, Volume 23(8), pages 754-766. I am a Doctor of Nursing student at Western Kentucky University in Kentucky in the United States. The problem statement for my capstone project is: Are there differences between rural and urban nurses' knowledge and perceived competence for end-of-life patients in long-term care facilities? Your consideration and permission would be greatly appreciated. Would you e-mail me with your response.

Sincerely,

Thank You

Carol Ann Evans MSN, RN, NED, CNE

Associate Professor

BSN Prelicensure Program

Western Kentucky University

Office Phone:

RE: Permission

Page 1 of 2

RE: Permission

Mason, Stephen [Stephen.Mason@liverpool.ac.uk]

Sent: Thursday, March 28, 2013 10:41 AM

To: Evans, Carol

Dear Carol,

thanks for your enquiry. Please feel free to use the scale - all we ask if that the scale is acknowledged accordingly in any publications that arise from your research.

If you wish, I can send you a formatted version of the scale for your study – let me know. Equally, am happy to answer any questions you may have

NB – please use my University of Liverpool account for correspondence as I only check my Hospice address occasionally

Kind regards,

Stephen

Dr Stephen Mason
Research & Development Lead
Marie Curie Palliative Care Institute Liverpool (MCPCIL)

From: Stephen Mason [mailto:Stephen.Mason@mariecurie.org.uk]

Sent: 28 March 2013 15:34

To: Mason, Stephen

Subject: Fwd: Permission

Sent from my iPhone

Begin forwarded message:

From: "Evans, Carol" <carol.evans@wku.edu>

Date: 27 March 2013 00:13:37 GMT

To: "stephen.mason@mariecurie.org.uk" <stephen.mason@mariecurie.org.uk>

Cc: "Evans, Carol" <carol.evans@wku.edu>

Subject: Permission

Dr. Mason,

I sending this e-mail to ask for permission to use your tool, "Self-Efficacy in Palliative Care Scale". I read about your tool in the journal, "Medical Education", that was published in 2004, Volume 38, pages 1103-1110. I am a Doctor of Nursing student at Western Kentucky University in Kentucky in the United States. I have practiced nursing for the last twenty-nine years and have taught nursing at a university level for last thirteen years. I teach Fundamentals of Nursing where I teach first year

RE: Permission

Page 1 of 4

RE: Permission

Mason, Stephen [Stephen.Mason@liverpool.ac.uk]

Sent: Monday, March 17, 2014 9:48 AM

To: Evans, Carol

Cc: Mason, Stephen [Stephen.Mason@liverpool.ac.uk]

Hi Carol

Yes - I 'm happy enough if you want to alter the scale. Of course, as the VAS was used in the psychometric evaluation of the scale, you will need to discuss the scale change and potential effects upon your data - but this is a point you argue appropriately in any papers I'm sure.

Sorry for the delay in getting back to you - been laid low last week by w "Manflu" - which is really just a normalish bad cold, but hyped up for sympathy :)

Dr Stephen Mason
Research & Development Divisional Lead

From: Evans, Carol [carol.evans@wku.edu]

Sent: 09 March 2014 19:37

To: Mason, Stephen

Cc: Evans, Carol

Subject: RE: Permission

Dr. Mason,
Is it ok with you to use a numeric rating scale 0-8 (0= zero confidence and 8 = highly confident) on the SEPC instead of a visual analog scale?
Best regards,
Carol

Carol Ann Evans MSN, RN, NED, CNE
Associate Professor
RN to BSN Program
Western Kentucky University

From: Mason, Stephen [Stephen.Mason@liverpool.ac.uk]

Sent: Tuesday, January 07, 2014 3:41 AM

To: Evans, Carol

Cc: Mason, Stephen; Rowe, Helen [hrowe]; Dowson, Jane

Subject: RE: Permission

Dear Carol,

Am really glad to hear your project is progressing and you are now in position to soon start collecting data. I've attached a "MS Word" version of the Scales I used in my study (Self-Efficacy in Palliative Care; Thanatophobia Scale) - we presented these as a composite measure, but I've separated them here for clarity - also, you may need to amend the introduction to each. NB - take care if printing paper copies that the VAS is 100mm - different printers sometimes render the VAS a little long or short.

Please don't hesitate to contact me if you need any more information - and please do keep me informed of how you project progresses.

Kind regards,

Stephen

Dr Stephen Mason

Research & Development Lead

Marie Curie Palliative Care Institute Liverpool (MCPCIL)

-----Original Message-----

<https://email.wku.edu/owa/?ae=Item&t=IPM.Note&id=RgAAAAAqFOJbaPnyQoT6PclaG...> 4/18/2014

Appendix B

Demographical Data Survey

DEMOGRAPHICAL DATA SURVEY

- 1.) Sex: Female or Male (Choose one).
- 2.) Age (years): _____ (Fill in the blank).
- 3.) Race (Choose one that applies)
 - a.) African-American or Black
 - b.) American Indian or Alaska Native
 - c.) Asian
 - d.) White
 - e.) Native Hawaiian or Other Pacific Islander
 - f.) Mixed
 - g.) Unknown
- 4.) Ethnicity (Choose one that applies)
 - a.) Hispanic or Latino
 - b.) Non-Hispanic or Non-Latino
 - c.) Not Reported
- 5.) Highest education level completed in nursing (Choose one that applies)
 - a.) Licensed Practical Nurse (LPN, LVN)
 - b.) Associate Degree in Nursing (ASN)
 - c.) Bachelor of Science in Nursing (BSN)
 - d.) Masters of Science in Nursing (MSN)
 - e.) Doctorate in Nursing (Ph.D. or DNP)
- 6.) Duration as a nurse (years): _____ (Fill in the blank).
- 7.) Duration of employment at present facility (years): _____ (Fill in the blank).
- 8.) Level of care/floor where you work within the facility (Choose one below)
 - a.) Personal Care Level
 - b.) Intermediate Care Level
 - c.) Skill Care Level
- 9.) Total years practiced in Long Term Care facilities: _____ (Fill in the blank).
- 10.) Number of palliative care in-services/continuing education courses attended in last two years: _____ (Fill in the blank).
- 11.) Have you had a relative or significant other in a palliative care unit? Yes or No (Circle one)

Appendix C

Palliative Care Knowledge Test

Palliative Care Knowledge Test

The Palliative Care Knowledge Test is utilized to assess the knowledge level of nurses and to identify the factors associated with palliative care knowledge. Read each questions and mark “True”, “False”, “Unsure” for your answer.

	True	False	Unsure
Palliative care should only be provided for patients who have no curative treatment available.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Palliative care should not be provided along with anti-cancer treatments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
One of the goals of pain management is to get a good night's sleep.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When cancer pain is mild, pentazocine (Talwin) should be used more often than an opioid.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When opioids are taken on a regular basis, non-steroidal anti-inflammatory drugs should not be used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The effect of opioids should decrease when pentazocine (Talwin) or buprenorphine hydrochloride (Buprenex) is used together after opioids are used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Long-term use of opioids can often induce addiction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use of opioids does not influence survival time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Morphine should be used to relieve dyspnea in cancer patients.			
When opioids are taken on a regular basis, respiratory depression will be common.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oxygen saturation levels are correlated with dyspnea.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anticholinergic drugs or scopolamine hydrobromide (Transderm-V) are effective for alleviating bronchial secretions of dying patients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
During the last days of life, drowsiness associated with electrolyte imbalance should decrease patient discomfort.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Benzodiazepines should be effective for controlling delirium.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some dying patients will require continuous sedation to alleviate suffering.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Morphine is often a cause of delirium in terminally ill cancer patients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At terminal stages of cancer, higher calorie intake is needed compared to early stages.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is no route except central venous for patients unable to maintain a peripheral intravenous route.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steroids should improve appetite among patients with advanced cancer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intravenous infusion will not be effective for alleviating dry mouth in dying patients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Adopted from Nakazawa et al., (2009)

Appendix D

Self- Efficacy in Palliative Care Survey

SELF-EFFICACY IN PALLIATIVE CARE (SEPC) SCALE

Presented are a series of statements that relate to issues and experiences that may be encountered when working within a palliative care unit. In answering the questions, we would like you to **imagine how you think you would feel** in relation to the issues and situations presented. **Please read the instructions at the top of each page and answer every question.**

THE FOLLOWING STATEMENTS RELATE TO COMMUNICATION ISSUES THAT MAY BE ENCOUNTERED WITHIN PALLIATIVE CARE.

PLEASE ANSWER THE FOLLOWING QUESTIONS BY PLACING AN “X” ON THE LINE BETWEEN “VERY ANXIOUS” AND “VERY CONFIDENT” IN RELATION TO HOW YOU THINK YOU WOULD FEEL.....

I would feel...

very anxious	very confident	discussing the likely effects of cancer with the patient

very anxious	very confident	discussing the likely effects of cancer with the patient's family

very anxious	very confident	discussing issues of death and dying

very anxious	very confident	discussing the patient's own death (<i>with the patient</i>)

very anxious	very confident	discussing the patient's death (<i>to occur</i>) with the family

very anxious	very confident	discussing the patient's death with the family upon bereavement

very anxious	very confident	answering the patient's question "How long have I got to live?"

very anxious	very confident	answering the patient's question "Will there be much suffering or pain?"

THE FOLLOWING STATEMENTS RELATE TO MULTI-PROFESSIONAL ISSUES THAT MAY BE ENCOUNTERED WITHIN PALLIATIVE CARE.

PLEASE ANSWER THE FOLLOWING QUESTIONS BY PLACING AN “X” ON THE LINE BETWEEN “VERY ANXIOUS” AND “VERY CONFIDENT” IN RELATION TO HOW YOU THINK YOU WOULD FEEL.....

I would feel...

-----	working within a multi-professional palliative care team
very anxious	very confident
-----	appropriately referring palliative care patients for physiotherapy
very anxious	very confident
-----	appropriately referring palliative care patients for occupational therapy
very anxious	very confident
-----	appropriately referring palliative care patients for complementary therapies
very anxious	very confident
-----	appropriately referring palliative care patients to a lymphoedema service
very anxious	very confident
-----	appropriately referring palliative care patients for psychiatric evaluation
very anxious	very confident
-----	appropriately referring palliative care patients to a spiritual advisor
very anxious	very confident

Appendix E

Letter of Participation to Facilities

Letter of Participation

Name: Carol Evans MSN, RN, NED, CNE-Doctor of Nursing Practice Student a Western Kentucky University

Title of Capstone Project: Rural and Urban Nurses' Knowledge and Perceived Confidence/Competency to Provide Palliative Care to End of Life Patients in Long Term Care Settings

Explanation of Study: I will be surveying nurses in three rural and three urban long term care facilities in south-central Kentucky. The study is voluntary. The **subjects' identity and the facility's identity are anonymous**. I will utilize three different surveys. One survey will collect demographical data pertaining to the nurses' practice, educational level, and palliative care. The second survey will examine nurses' knowledge of palliative care which consists of twenty "True" or "False" questions. The third survey will ask the nurse "How do they feel" pertaining to questions about communication, patient management, and multidisciplinary teamwork on a scale of one to seven which pertains to the nurse's confidence/competency to provide palliative care.

I hope to gain the permission from the facility's administrator and Director of Nursing to attend one of the facility's in-service after I complete Institutional Review Board (IRB) at Western Kentucky University this summer 2014.

How the Study Will Help: The nurses' participation will greatly benefit the understanding of nurses' knowledge and how confident/competent nurses in long term care facilities feel about providing palliative care. Findings from the evaluation may serve as a foundation for future educational in-services. Also, the findings may be used to provide evidence for future research in the area of palliative care and end of life care.

Thank you for your consideration.

Sincerely,

Carol Evans MSN, RN, NED, CNE

carol.evans@wku.edu

Office phone number: (270) 745-489

Cell phone number: (270) 792-4523

Home phone number: (270) 526-3450

April 7, 2014

Institutional Review Board

Western Kentucky University

Bowling Green, Kentucky 42101

RE: Research Study to be conducted at Colonial Manor

To Whom It May Concerns:

This letter is written to indicate our support of the research study to be conducted by Carol Evans, a Doctor of Nursing student at Western Kentucky University, concerning nurses' knowledge and perceived confidence/competency to provide palliative care for end-of-life patients in long term care facilities.

We understand that Carol Evans will be on-site collecting data from the nurses employed at the facility during an in-service activity, and we will gladly assist her by whatever means.

We look forward to hearing the results of the study.

Sincerely,

Director of Nursing

A handwritten signature in black ink that reads "Deane Phipps DNS".A handwritten signature in blue ink that reads "C. Scott, Admin".

Administrator of Facility

04/16/2014 17:23 2706843126

BON HARBOR NORTH

PAGE 01/01

March 31, 2014

Institutional Review Board

Western Kentucky University

Bowling Green, Kentucky 42101

RE: Research Study to be conducted at: Twin Rivers Nursing & Rehab

To Whom It May Concerns:

This letter is written to indicate our support of the research study to be conducted by Carol Evans, a Doctor of Nursing student at Western Kentucky University, concerning nurses' knowledge and perceived confidence/competency to provide palliative care for end-of-life patients in long term care facilities.

We understand that Carol Evans will be on-site collecting data from the nurses employed at the facility during an in-service activity, and we will gladly assist her by whatever means.

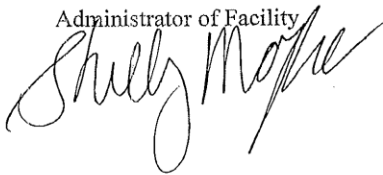
We look forward to hearing the results of the study.

Sincerely,

Director of Nursing



Administrator of Facility



March 31, 2014

Institutional Review Board
Western Kentucky University
Bowling Green, Kentucky 42101

RE: Research Study to be conducted at: GREENWOOD NURSING + Rehabilitation

To Whom It May Concerns:

This letter is written to indicate our support of the research study to be conducted by Carol Evans, a Doctor of Nursing student at Western Kentucky University, concerning nurses' knowledge and perceived confidence/competency to provide palliative care for end-of-life patients in long term care facilities.

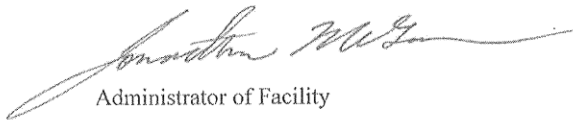
We understand that Carol Evans will be on-site collecting data from the nurses employed at the facility during an in-service activity, and we will gladly assist her by whatever means.

We look forward to hearing the results of the study.

Sincerely,



Director of Nursing



Administrator of Facility

04/09/2014 WED 14:55 [JOB NO. 6525] 2002

March 31, 2014

Institutional Review Board

Western Kentucky University

Bowling Green, Kentucky 42101

RE: Research Study to be conducted at Edmonson Care and Rehabilitation Center

To Whom It May Concerns:

This letter is written to indicate our support of the research study to be conducted by Carol Evans, a Doctor of Nursing student at Western Kentucky University, concerning nurses' knowledge and perceived confidence/competency to provide palliative care for end-of-life patients in long term care facilities.

We understand that Carol Evans will be on-site collecting data from the nurses employed at the facility during an in-service activity, and we will gladly assist her by whatever means.

We look forward to hearing the results of the study.

Sincerely,



Director of Nursing



Administrator of Facility

May 15, 2014

Institutional Review Board
Western Kentucky University
Bowling Green, Kentucky 42101

RE: Research Study to be conducted at Hopkin Center

To Whom It May Concerns:

This letter is written to indicate our support of the research study to be conducted by Carol Evans, a Doctor of Nursing student at Western Kentucky University, concerning nurses' knowledge and perceived confidence/competency to provide palliative care for end-of-life patients in long term care facilities.

We understand that Carol Evans will be on-site collecting data from the nurses employed at the facility during an in-service activity, and we will gladly assist her by whatever means.

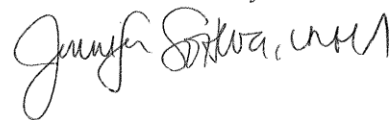
We look forward to hearing the results of the study.

Sincerely,

Director of Nursing



Administrator of Facility



05/22/2014 08:54 2706516989 BARREN CO
05/20/2014 TUE 8:30 FAX 12707454336 WKU Nursing

PAGE 02/03

0002/003

May 20, 2014

Institutional Review Board
Western Kentucky University
Bowling Green, Kentucky 42101

RE: Research Study to be conducted at Barren County Health Care Center

To Whom It May Concerns:


This letter is written to indicate our support of the research study to be conducted by Carol Evans, a Doctor of Nursing student at Western Kentucky University, concerning nurses' knowledge and perceived confidence/competency to provide palliative care for end-of-life patients in long term care facilities.

We understand that Carol Evans will be on-site collecting data from the nurses employed at the facility during an in-service activity, and we will gladly assist her by whatever means.

We look forward to hearing the results of the study.

Sincerely,


Director of Nursing


Administrator of Facility

Appendix F

Recruiter Scripted Statement

RECRUITER SCRIPTED STATEMENT

Introduction: Hi, my name is Carol Evans. I am a doctoral student at Western Kentucky University, and I am conducting a study for my capstone in partial fulfillment for the doctorate in nursing practice from Western Kentucky University (WKU).

Invitation to Participate: You were selected as a potential participant for a research study entitled “Rural and Urban Nurses Knowledge and Perceived Confidence/Competency to Provide Palliative Care to End of Life Patients in Long Term Care Facilities” because of the geographical location of your facility. All of you are invited to participate in this study that will evaluate palliative and end of life care. I will study the differences in palliative care knowledge and perceived confidence/competency to provide palliative care to end of life patients across the different geographical locations.

Agreement to Participate: If you agree to participate, I will need you to read the consent form and sign your agreement to participate. Your completion of the consent form and surveys will convey agreement to participate within the study. You will anonymously complete three different surveys. One survey will ask you to complete a demographical survey which asks you about your nursing practice, education, and palliative care. The second survey will ask information about palliative care knowledge in a “True”, “False”, or “Unsure” format. The third survey will ask you how you feel about communication, patient management, and multidisciplinary teamwork in providing palliative care. Complete the surveys and return the surveys in the designated folder. You will have the opportunity to participate in a drawing for a twenty-five dollar gift certificate at your facility.

Anticipated Risks: The risks associated with this study are minimal but could include a breach in confidentiality or feelings of coercion to participate. Should you need to discuss your feelings about participating in this research, you can speak with me, your Director of Nursing, or administrator.

Confidentiality of Data: All information obtained from you will remain confidential in a locked filing cabinet in Medical Center Health Complex Room 3326. The only other individuals who will review the data will be professors at WKU and a statistician. No identification will be provided on the forms to link the response to an individual nurse or facility.

How the Study Will Help: Your participation will greatly benefit the understanding of nurses' knowledge and how confident/competent nurses in long term care facilities feel about providing palliative care. Findings from the evaluation may serve as a foundation for future educational inservices. Also, the findings may be used to provide evidence for future research in the area of palliative care and end of life care.

Decision to Participate or Not and Withdrawal of Consent: Your decision whether or not to participate will not prejudice your future relations with WKU or your facility.

If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without penalty. If you decide to withdraw from the study prior to completing the requested three surveys, please simply do not return these collection tools. Once these tools are collected, your specific response tools cannot be retrievable as it will not have your name or identifying code on them.

If you have questions concerning the study, presently or in the future, I will be happy to answer/address those concerns. You can contact me by email at carol.evans@wku or phone at (270) 745-4589-office or (270) 792-4523-cell or (270) 526-3450-home.

Appendix G

Consent Form

INFORMED CONSENT DOCUMENT**Project Title:**

Rural and Urban Nurses' Knowledge and Perceived Confidence/Competency to Provide Palliative Care to End of Life Patients in Long Term Care Facilities

Investigator:

Carol Evans MSN, RN, NED, CNE; Doctoral Student with Western Kentucky University (WKU) Doctor of Nursing Program (DNP); 270-526-3450

You are being asked to participate in a project conducted by Carol Evans, DNP candidate at WKU. The University requires that you give your consent to participate in this project. You may ask her any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have. If you then decide to participate in the project, your continued cooperation with the following implies your consent.

1. Nature and Purpose of the Project:

The project will collect quantitative data from nurses who work in long term care facilities. The project attempts to examine the differences between rural and urban nurses' (registered nurses and licensed practical nurses):

- Knowledge of palliative care that pertains to philosophy, pain, dyspnea, psychiatric problems, and gastrointestinal problems.

And

- Perceived confidence/competency to provide palliative care that pertains to communication, patient management, and professional multidisciplinary teamwork for end of life patients.

2. Explanation of Procedures:

Participation is voluntary. If you agree to be in this study, I will ask you to complete a series of three surveys. The surveys will ask you about your knowledge of palliative care and your perception of how confident or competent that you feel that you are to provide palliative care to end of life patients in long term care facilities, and demographical data. The study requires you to fill out the three surveys which will take approximately 15 minutes.

3. Discomfort and Risks:

There will be no known risks in participating in this study. The name of the facility and your name will not be identified. Do not write your name on the surveys.

4. Benefits:

Participants will have the potential to win a twenty-five dollar gift certificate from Walmart at the end of the collection of data at the facility. By participating in this project, the knowledge of palliative care and perceived confidence/competency to provide palliative care from nurses who work with end of life patients in long term care facilities may be better understood. Findings

from the evaluation may serve as a foundation for future educational in-services. Also, the findings may be used to provide evidence for future research in the area of palliative care and end of life care.

5. Confidentiality:

Data will be collected from the paper and pencil surveys. You will not be asked to identify yourself or the facility. The surveys upon completion will be placed within a sealed envelope identified as a rural or urban facility. The original documents will be kept in a locked filing cabinet within the primary investigator's office. Data will be entered on a statistical sheet located on a password protected computer. Once the data is analyzed, the data will be erased from the computer. The hard copy of the surveys will be kept in a locked filing cabinet for three years and then destroyed.

6. Refusal/Withdrawal:

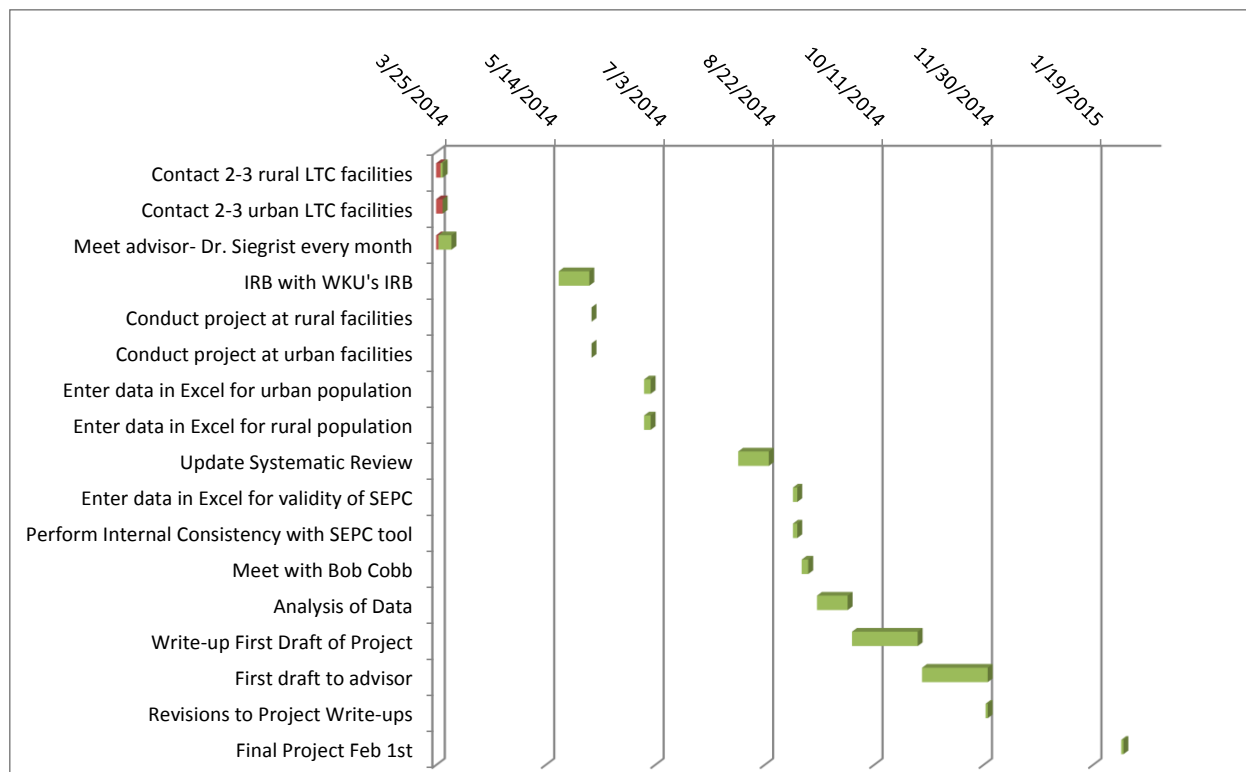
Refusal to participate in this study will have no effect on any future services you may be entitled to from the University or the facility. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

“Your continued cooperation with the following implies your consent”

THE DATED APPROVAL ON THIS CONSENT FORM INDICATES THAT
THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-2129

Appendix H

Gantt Chart

Gantt Chart

Appendix I

Statistical Chart for PCKT and SEPC Survey for Study Subjects

Statistical Chart for PCKT and SEPC Survey for Study Subjects

	Urban or Rural					
	R			U		
	N	Mean	SD	N	Mean	SD
Total knowledge of PCKT	33	9.58	2.77	41	10.1	2.25
PCKT subset: Philosophy	33	1.76	0.56	41	1.80	0.51
PCKT subset: Pain	33	2.58	1.20	41	2.56	1.12
PCKT subset: Dyspnea	33	1.21	0.93	41	1.59	1.07
PCKT subset: Psychosocial	33	1.61	0.79	41	1.80	0.93
PCKT subset: Gastrointestinal	33	2.42	1.03	41	2.32	0.82
Total for the SEPC Survey	33	1535	327	41	1663	331
SEPC Survey: Communication	33	474	163	41	541	159
SEPC Survey: Patient Management	33	571	101	41	608	101
SEPC Survey: Multi-Professional issues	33	491	136	41	514	113
Following is questions on the SEPC Survey: I would feel						
discussing the likely effects of cancer with the patient	33	50.8	28.0	41	64.2	27.5
discussing the likely effects of cancer with the patient's	33	52.1	27.0	41	67.6	23.5
discussing issues of death and dying	33	63.1	26.2	41	70.4	24.6
discussing the patient's own death (with the patient)	33	56.5	29.2	41	66.2	26.3
discussing the patient's death (to occur) with the family	33	63.2	26.6	41	68.5	26.0
discussing the patient's death with the family upon bereavement	33	65.9	25.5	41	71.4	23.6
answering the patient's question "How long have I got to live	33	57.6	27.3	41	64.2	27.0
answering the patient's question "Will there be much suffering	33	64.5	23.8	41	68.2	23.5
in my ability to assess the patient's needs	33	82.2	10.6	40	83.0	11.7
in my knowledge of the etiology of common symptoms experience	33	64.1	23.3	41	74.8	18.9
in my ability to manage common symptoms experienced in palliative	33	74.3	14.2	41	78.0	15.6
in my ability to prescribe appropriate and adequate pain control	33	63.4	26.6	40	72.1	24.4
in my knowledge of the therapeutic and side effects of analgesics	33	72.0	18.9	41	77.4	14.2
in my ability to provide psychological care for the palliative	33	73.4	19.8	41	77.2	16.7
in my ability to provide social care for the palliative care	33	69.7	22.6	41	74.5	17.6
in my ability to provide spiritual care for the palliative ca	33	72.1	19.6	41	74.7	20.5

	Urban or Rural					
	R			U		
	N	Mean	SD	N	Mean	SD
working within a multi-professional palliative care team	33	73.9	21.8	40	80.6	14.3
appropriately referring palliative care patients for physiotherapy	33	68.8	22.3	41	71.5	19.8
appropriately referring palliative care patients for occupational	33	69.2	22.6	41	74.5	17.5
appropriately referring palliative care patients for complementary	33	71.3	20.7	41	74.9	17.7
appropriately referring palliative care patients to a lymphoedema	33	65.0	22.1	41	68.0	22.0
appropriately referring palliative care patients for psychiatric	33	70.4	21.3	41	73.1	19.5
appropriately referring palliative care patients to a spiritual	33	72.1	24.4	41	73.3	25.9